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ARTICLE I.

On Antispasmodics, therapeutically considered. By ROBLEY DUNGLISON, M.D., Professor of Materia Medica, Therapeutics, Hygiène, and Medical Jurisprudence, in the University of Maryland.

PERHAPS with propriety the class of antispasmodics might be included under that of revellents, their whole effect being operated by revulsion. Such, however, is not the universal belief, and indeed great discrepancy has existed amongst therapeutical writers as to the precise situation in which they ought to be placed. Murray classes them, with narcotics, amongst the "diffusible stimulants," whilst Thomson places them with these same agents—as substances that diminish action secondarily. A short inquiry may tend to place them in their proper position.

Antispasmodics are usually defined—"substances that allay irregular muscular contraction," and Paris* affirms, that there are certain medicinal bodies, which would appear to exert a specific control over spasmodic action, from whatever cause it may have originated. Such, he says, are assafœtida, galbanum, musk, castor, ammonia, valerian, &c. He properly adds, however, that "in a more general view of the subject we must admit that this class branches, by indefinable gradations, into narcotics and

* Pharmacologia, Beck's Edit. p. 78.

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tonics, for since spasm may be connected with the most opposite states of the body, it is very evident, that many of the individuals included in the class of antispasmodics can only be relative agents: spasm, for instance, may arise from excessive irritability, as from teething, wounds, worms, &c., in which case a narcotic would prove beneficial; or it may depend upon a state of general debility, the proper remedy for which would be the administration of an aromatic stimulant, or the assiduous exhibition of some permanent tonic."

I do not think, however, that the therapeutist would be too sceptical in denying that, in the present state of our knowledge, we are acquainted with a single remedial agent, which acts specifically on the muscular fibre when in a state of spasmodic contraction. That such agents *may* exist cannot be denied, but we know, at this time, none such. They may all be regarded as *indirect* agents, relieving and removing spasmodic action, in consequence of their agency being exerted on other parts of the nervous system than those concerned in the irregular muscular contraction, and thus deriving from the nervous influence concerned in the production of the latter.

In order to thoroughly comprehend this position, let us inquire into the nature of spasm. The Greeks gave the name σπασμος to every kind of convulsion, and by modern nosologists convulsions are ranked amongst the *spasmi*. The term is now usually applied to involuntary contractions, especially of the voluntary muscles; and these, again, have been divided into *tonic* spasms, which consist in permanent rigidity of the muscles concerned,—of which we have an example in common cramp; and into *clonic* spasms, which consist in alternate contractions and relaxations, of which we have an example in the convulsions of children.

It is now admitted by most physiologists, that the muscular fibre, like every primary tissue of the body, is possessed of excitability or irritability,—that is, of a power of being acted upon by appropriate stimuli, and of moving responsive to such stimuli. This *vis insita*, however, absolutely requires that it shall be acted upon by stimuli before motion is perceptible. Now the muscular filaments of the voluntary muscles are supplied with nerves from some part of the cerebro-spinal axis, and along these nerves the appropriate stimulus is sent which rouses them to contraction. In the case of voluntary motion—say of the biceps of the arm to raise any weight attached to the hand, or to the extremity of the forearm—an act of volition is executed, under the

influence of which the portion of the cerebro-spinal axis, whence the nerves proceed to the upper extremity, is excited to send the proper nervous influx along those nerves, in quantities strictly in accordance with the extent of action, which the muscle should execute. The muscle immediately contracts responsive to the stimulation. Now, if any cause of irritation exist in the cerebro-spinal axis, or indeed in any part of a nerve distributed to a muscle, such irritation may induce precisely the same effect as the act of volition, and the muscle may, in this manner, be permanently or intermittently contracted. In all cases, therefore, spasm is a nervous phenomenon, and the remedies that are adapted for its removal must exert their agency on some part of the nervous system—not on the muscular fibres, over the condition of which they would not appear to have the slightest control.

They, who admit "direct" antispasmodics, find that difficulties environ them, the very nature of which entangles the subject in inextricable meshes. One of the latest writers on therapeutics,* after entering into a long and singularly infelicitous disquisition on the precise agency of antispasmodics, suggests—as a point requiring consideration—whether antispasmodics are stimulants or sedatives; and he decides that they are sedatives, "for," he remarks, "if the irregular or inordinate action which they overcome be the consequence of irritation, either mental or corporeal, it follows, that in resolving spasm the susceptibility of impression in the extreme motor nerves must be diminished, and this can only be the result of a sedative power. It may, however, be affirmed, that this must either be immediate or consecutive of a previous stimulant operation; thence we can explain the reason why some of those medicines, which can only be regarded as direct antispasmodics, stimulate the general system, and consequently quicken the pulse; since, like narcotics, this action may be primarily of a stimulant character, and be quickly followed by collapse. According to this mode of reasoning, the same results may follow from antispasmodics operating exclusively on the motor nerves, as from narcotics operating on those of sensation."

Without tarrying to animadvert on many of the hypothetical positions contained in this extract, as to the *modus operandi* of antispasmodics and the parts on which they specially act, I may observe, that every difficulty vanishes when we regard the *direct*

* Professor A. T. Thomson, in "Elements of Mat. Med. and Therap." vol. i. p. 606.

antispasmodics—for such only can be esteemed true antispasmodics—as revellents only, acting by virtue of the new impression they make on the gustatory or gastric nerves, and thus deriving from the inordinate action going on in some other portion of the nervous system. What, indeed, are the reputed direct antispasmodics?—musk, castor, Dippel's oil, oil of amber, valerian, assafœtida, galbanum, bitumen, skunk-cabbage, ethers, &c.,—all substances belonging to the class of excitants, and many of them calculated to make, in addition, a powerful impression on the nerves of gustation and olfaction: and what again are the *indirect antispasmodics?* Dr. Thomson divides them into *material*, including tonics and narcotics; and *mental*, comprising fear and abstraction. It is strange, however, that he should not have classed blood-letting amongst the material agents, especially as he had previously remarked, with much propriety, that whether the effects of antispasmodics are perceptible very soon after their administration must necessarily depend on the cause of the spasm, "whether it arise from exhaustion and collapse, such, for example, as occurs from blood-letting, when the quantity of the vital fluid abstracted is more than the condition of the system can support; in which case nothing is more common than for syncope to be attended with convulsions; or whether it depend on the opposite state, fulness of the vessels of the brain, sufficient to produce epilepsy, or on some degree of inflammation, as in phrenitis, which is sometimes also attended with convulsions." "It should ever be remembered," he adds, "that although antispasmodics are indicated and proper in the first state, just described, yet that this class of medicines is positively injurious when the spasmodic action is the consequence of inflammation of the brain or spinal marrow or their coverings: under such circumstances, blood-letting and measures calculated to subdue the primary disease, are the means to be adopted."

One of the great difficulties, indeed, in discriminating the character of different diseases of the convulsive kind, is involved in the consideration, whether they are dependent upon an inflammatory or congestive condition of vessels, or whether they may not be connected with exhaustion or excessive irritability of the nervous system.

In ordinary cases of spasmodic action, not dependent upon any excited action of vessels, any thing that produces a new nervous impression will prove antispasmodic. Narcotics do so by allaying the impressibility of the whole nervous system.

Nauseous agents produce their effects upon the olfactory or gustatory nerves, and—if they be excitants at the same time—upon the nerves of the stomach. Simple excitants and tonics act on the same nerves, and through them on the general system. Nothing, indeed, could better elucidate the *modus operandi* of these agents, than the consideration of those which Dr. Thomson has termed mental narcotics—fear and abstraction.

He refers to a striking instance of the sanative effect of fear in hooping cough kept up by habit. The patient, a young boy, was threatened with the application of a large blister, and although it was not applied, but merely placed within his view, the dread of it completely removed the cough.

Boerhaave is asserted to have cured epilepsy, by taking a red-hot poker at the moment of the expected attack, and threatening to push it down the throat if the patient should have a fit. Still more recently, the same remedy has been advised to be directed towards the nether extremity of the body. In a treatise on plague, dysentery, and ophthalmia, Dr. Ludovic Frank recommends, that a dysenteric patient should be tied hand and foot, and be held by two men, when "chirurgus cum ferro candenti, figuram coni habenti, coram ægroto compareret, et id versus anum dirigeret, quasi id ano intrudere vellet."*

All these are cases of the simple revulsive effect of fear, and in this way any mental emotion may prove antispasmodic. Any form of abstraction, or rather of distraction, is necessarily revellent and antispasmodic. When Cato, the Censor, reduced luxations, as he pretended, by certain mystic words, he diverted the attention of the sufferer, prevented inordinate contraction of the muscles around the dislocated joint, and a slight manipulation only was necessary to reduce it. At the present day, the surgeon is in the habit of invoking this agency, and although he may have no faith in set forms of speech, or in cabalistic expressions, he knows, that if he can concentrate the attention of the patient, he may lessen the contraction of the muscles, by diverting, in some measure, the nervous influx from them, and if he suddenly exerts his skill at reduction, when the mind is occupied with other matters than the accident, the bone can occasionally be made to slip readily into its place.

By a precisely analogous agency the animal magnetizer ope-

* *De Peste, Dysenteria, et Ophthalmia Ægyptiaca.* Auctore Ludovico Frank, M.D., pp. 223. 8vo. Viennæ, 1822.

rates his cures, and change of air, society, and scenery, exert their good effect on nervous maladies. It is not long since I visited a gentleman who had suffered for some hours under such excruciating pains in the bowels as to induce him to believe that he was labouring under enteritis. As soon as I had examined into his case and laughed at his fears,—under the new mental condition induced, the colicky spasms rapidly disappeared. The nervous, the imaginative, can feel pains wherever they please, and many an individual, by the perusal of cases of disease, has fancied himself affected with the same pains which he has seen described. If, therefore, *attention* can direct the nervous afflux to a part, it is obviously of great moment so to impress the nervous system of the individual, that no concentration of the kind shall take place to the suffering organ; and this can be accomplished by engaging the mind upon some subject of entertainment or reflection, by impressing the totality of the nervous system, or by affecting nerves at a distance from those implicated.

I have before observed, that I do not regard the "direct" or "true antispasmodics," as they have been termed, as worthy of the name, and that I esteem them to produce their effects by the impression they make on the nerves of two of the senses, and by their stimulant properties, which, in the case of the articles referred to as true antispasmodics, are dependent upon animal resin, empyreumatic oil, volatile oil, gum, resin, or bitumen. It has been affirmed, however, that this view is negatived by the fact, that assafœtida—and the remark applies to the other articles on the list—relieves hysteria even when injected into the rectum, and when, of course, there can be no impression made on either the gustatory or olfactory nerves. This is true; but the whole effect appears to be produced by the excitant properties of the gum-resin; and that this is the case is demonstrated by the fact, that if we throw up an excitant, which may never have been regarded as an antispasmodic, we produce the like result. By either agent we make a new impression on the nerves of the rectum, and this derives from the morbid condition seated elsewhere in the nervous system, and at times rouses the individual to consciousness. In such cases, I am in the habit of administering an enema of the oil of turpentine,—not, however, because I regard it as possessing any virtues over the excitant oils in general. I do not look upon it as entitled, in any respect, to the appellation of a "direct" or "true" antispasmodic.

To exhibit what little confidence is reposed in the "true antispasmodics" by practitioners in general, even by those who consider that such a class really exists, it may be well to inquire briefly into the different antispasmodics, *direct* and *indirect*, that are employed in affections of the nervous system, which are regarded by all as eminently adapted for them; an inquiry, which will signally exhibit how much more the latter class are relied on, when much disease is present, than the former. There is, indeed, but one morbid condition in which the "direct antispasmodics" are largely employed at the present day, and the rationale of their action in it is sufficiently manifest.

Tetanus affords us an example of a tonic spasm, which would seem to be signally adapted to test the efficacy of "direct antispasmodics." The disease is seated in the great nervous centres, and unfortunately is too often totally irremediable. Rarely, however, do we find *musk*, or *assafœtida*, or *castor*, or any of the direct antispasmodics, employed, because experience has exhibited their insufficiency. Trust is reposed almost wholly on the *indirect* agents, and especially on narcotics, of which opium is usually chosen; and it is astonishing what quantities will be borne without the induction of any signs of narcosis. Cases are recorded in which fifteen or twenty grains have been given every three hours for several days in succession, and yet but little effect has been produced on the disease, or the patient. Under the derangement of the nervous centres, which constitutes the pathology of tetanus, narcotics do not produce their ordinary results, and the same remark applies to the cases of great exaltation in the action of the nervous centres, which characterize many of the diseases belonging to the class "neuroses."

A case of tetanus algidus—or tetanus from cold—which fell under my care some time ago, may serve to illustrate the mode in which antispasmodics exert their agency. A young man, whilst heated, threw himself into a river to bathe. He immediately experienced some indisposition, and a few hours afterwards was attacked with tetanus, in the form of opisthotonos. He was put upon the use of narcotics, but without the disease yielding. He was now taken out of bed, placed in a brook that ran by the house, and pailful after pailful of cold water was thrown over him, whenever the spasms became violent. Soon after the adoption of this treatment the spasms yielded, and by a continuance of it they ultimately passed away. The boy wholly recovered.

Now this remedy probably exerted its agency in the manner I have described as applicable to antispasmodics in general. It made a new impression on the nervous system by the shock that accompanied the affusion, and in this way broke in upon the chain of morbid phenomena seated in the great cerebro-spinal system.

Chorea is another disease in which the true antispasmodics might seem to be indicated, yet they are but rarely employed in it. The disease appears to depend usually upon great mobility of the nervous system, chiefly of the part connected with the nerves distributed to the voluntary muscles, united with diminished impressibility of the nerves of the ganglionic class: hence tonics and purgatives are relied on, and they become "indirect antispasmodics."

Epilepsy is dependent upon so many causes, that its treatment has to be varied according to circumstances. In the majority of cases, however, as in every disease characterized by periodicity, a powerful impression made upon the nervous system will prevent a paroxysm; but the impression must be made immediately before it is expected. Except for the purpose of preventing a paroxysm, true antispasmodics cannot in any respect be relied on; but if a large dose of assafœtida, castor, or musk, were administered immediately before the hour at which a fit of epilepsy or of ague were expected, it might prevent it. It is in such cases that the mental antispasmodics have been mainly employed. Any agent, indeed, that excites a new and powerful impression—any revellent—may be followed by the same results. Most commonly epilepsy is attended by evidences of great impressibility and debility of the nervous system, and tonics—especially the metallic tonics—are chiefly relied on.

Asthma, again, must be looked upon as a nervous disease—spasmodic in its character generally, that is dependent upon an excited state of the branches of the pneumogastric nerves distributed to the bronchial tubes, but sometimes owing apparently to something like paralysis of the same nervous branches. Hence different agents are effectual according to the precise pathological condition. Commonly, however, narcotics are most signally beneficial. Opium is given in large doses. Stramonium is smoked; the lobelia inflata is largely administered; and all these are occasionally eminently successful; but we rarely hear of the administration of the "direct" antispasmodics, although from the suddenness of the attacks of this disease they might

seem to be indicated, and might occasionally be useful. They are so completely eclipsed by the indirect antispasmodics, just mentioned, that they are very rarely employed.

Hooping cough, although a peculiar disease, is somewhat analogous in its pathology to the last. It is chiefly seated in the pneumogastric nerves. When Nasse bruised and pinched one of those nerves in a living animal, so as to break down the structure of the nerve, he found that convulsive cough was excited like that of hooping cough. But although this disease is so markedly convulsive as to have received the name *bex convulsiva*, and various others indicating its character, none but "indirect antispasmodics" have received the confidence of the practitioner. Narcotics generally have been employed, and of these the belladonna more frequently than any other; but scarcely ever assafœtida, musk, castor, or any of the "direct" agents belonging to the class we are considering.

In common colic, both the "direct" and "indirect antispasmodics" may be at times advantageously used; and the same may be said of some forms of gastrodynia. Where these are dependent upon causes which gentle excitants are capable of obviating, a stimulating gum-resin—like assafœtida—may be employed with prospects of benefit. Hence it is serviceable in flatulencies, for the removal of which it is often had recourse to in popular practice.

It is only in hysteria that the direct antispasmodics are, at this day, much used. The affection is cerebro-spinal, and the symptoms that indicate it are most numerous and varied. There is scarcely a nerve, indeed, or a ramification however small, which does not occasionally seem to participate in the morbid condition. Generally the nervous erethism is chiefly concentered in the cerebro-spinal axis, whence irradiations proceed to every part of the economy, and the object which the practitioner has in view is to divert the nervous action to some other portion of the frame. Hence he administers substances that are as nauseous as possible, combined or not with excitants, as he may think proper. With this view he prescribes *assafœtida*, *valerian*, the *dracontium*, the *spiritus ammoniæ succinatus*, and all the reputed "direct antispasmodics," during the paroxysm, and in the interval adapts his remedial agents to the indications which may suggest themselves.

The above observations on the use of antispasmodics, in diseases in which they would appear to be signally appropriate, will exhibit the little reliance that can be placed upon such as are

esteemed "direct" agents—the *antispasmodica vera;* and perhaps these brief remarks cannot better be terminated than by quoting the conclusion at which a therapeutical writer, already referred to, has arrived, after having occupied several pages of his work in the explanation of the modus operandi of *direct antispasmodics.*

"From what has been said, it is evident that the range of this class of medicines (antispasmodics) is extremely limited; and, in fact, that every thing which the substances placed in it can effect, even as direct antispasmodics, may be accomplished by other orders of medicines—purgatives, diaphoretics, narcotics, and tonics. At best, antispasmodics can be regarded only as auxiliaries; and the spasms and convulsions are less to be considered than the causes which induce them: remove the cause, and the effect will cease."*

ARTICLE II.

Remarks on the Pathology and Treatment of Hemorrhoidal Tumors. By N. R. Smith, M.D. Professor of Surgery in the University of Maryland.

Although the pathological character of hemorrhoids has often been the subject of investigation, it by no means appears that the conclusions at which any author has arrived in regard to them, have become universally acknowledged principles. The diversity of opinions still prevalent, would seem to justify further investigations.

I apply the term "hemorrhoids" (and in so doing am not singular) to those blood-congested tumors which occur at the inferior extremity of the rectum, whether they bleed or not. Indeed, there is no term which is strictly applicable to this disease in all its various forms and stages, except the general appellation, "tumor," for sometimes they become no longer bloody tumors, (although always so in their commencement,) but are white and fleshy.

The proper character of these tumors is undoubtedly derived from the peculiar anatomy and offices of the parts in which they are located. The rectum is lined within by a mucous membrane of unusual volume, necessarily loose in its connections, very vascular, and very sensitive. The veins of this membrane are derived from two sources—the internal iliac, and the vena portarum.

* Thomson, *op. cit.* i. 628.

Branches from the former source are appropriated to the verge of the anus, while those from the latter supply the superior portions of the rectum. But these ramuli freely anastomose with each other, forming the plexus hæmorrhoidalis. That portion of the vena portarum terminating in the rectum is the most depending part of that system, and this circumstance is of the more importance because these vessels do not, like other veins, possess valves. In defecation, especially when considerable muscular effort is made, the blood in both systems of veins within the abdomen, is urged with force downward to the region where, by the influence of the will, the levator ani muscle and the sphincter yield at the moment to allow the descent of the feculent mass, and where of course the veins are less sustained, and the afflux of blood less resisted, than in any other region of the abdomen. The effort which expels fæces from the rectum, by precisely the same mechanical operation, sometimes expels blood in copious streams from the plexus hæmorrhoidalis venosus, when its power of resistance is impaired by disease.

Causes of Hemorrhoidal Tumors.

I have never in a single instance known hemorrhoids to occur in childhood. It is not till after the period of puberty, especially in the male, that this region assumes its utmost vascularity, the vessels of the rectum being necessarily influenced by the development of the prostate gland, vesiculæ seminales, &c. The inflammatory variety of hemorrhoids occurs most frequently in early and middle life. Varicose hemorrhoids more frequently happen in old age. Females are less subject to this disease than males, except during the period of utero-gestation, when these tumors are of frequent occurrence.

Persons rendered plethoric by inactive lives, and by indulgence in the pleasures of the table, are thus predisposed to hemorrhoids. Enlargements and indurations of the liver must necessarily predispose to these tumors, by the mechanical impediment which they occasion, both to the portal circulation, and to the return of blood by the vena cava. It is probably by inducing disease of the liver that intemperance is so common a cause of hemorrhoids. It is well known that the same cause occasionally favours the production of a varicose condition of the veins of the lower extremities. No remote cause, however, is more effective than habitual constipation—a state which is almost necessarily associated with a torpid circulation, but which especially produces engorgement

of the hemorrhoidal veins, by impacting the large intestines with fæces, and mechanically obstructing the return of blood. The effect also, in part, arises from the irritation caused by the presence of the hardened excrement, and especially from the strong muscular efforts made in its difficult evacuation. The mechanical irritation of these substances upon the verge of the anus, at the moment of its discharge, is often the immediate cause of an attack of hemorrhoids. An acrimonious condition of the feculent matters, exciting keen sensations at the verge of the anus when discharged, is productive of similar effects. "Likewise," says old Wiseman, "sharp humors, passing that way from the guts, do, by their acrimony, provoke the piles." When thus arising the disease is remotely dependent on unhealthy digestion, and a diseased state of those secretions which qualify the condition of the fæces.

Undue excitement of the genital organs necessarily creates engorgement of the vessels of the prostate, vesiculæ, and rectum, and therefore aids the production of hemorrhoids.

Pathology.

Before entering upon this department of our subject, I would premise that I shall recognize three varieties of the affection under consideration; 1st. *the inflammatory;* 2d. *the indurated;* 3d. *the varicose.* The first variety is by far the most common. The second is next in frequency, and invariably arises from the first. The third is often, but not invariably, the sequel of the first.

It has been the opinion of most surgeons that hemorrhoids are tumors arising from distension of the extreme veins of the part, and their conversion into cells, the coats of the veins becoming thickened by irritation, and the blood which lingers in them often becoming coagulated. The veins concerned have been supposed to be branches of the vena portarum. This belief has been probably founded, partly upon the physiological doctrine of the circulation, which supposes the blood never to leave the vessels in any part of its circuit, it being thought to pass directly from capillary arteries to capillary veins. It has been sanctioned also by the fact that, in one variety of the affection, this condition of the parts is demonstrable. If we lay open one of the tumors of the more common variety, the most constant appearance which we observe, is that of a fine reticulated tissue, in which the veins appear to terminate, their extremities appearing to be resolved into the filaments of this texture. In the centre of this tissue there is often a considerable cell, or cyst, generally

empty, but often containing a coagulum of blood. This will often have become in a degree organized, and have assumed a fleshy consistence. When one of these tumors, in a highly inflamed state, is laid freely open on the living subject, a very black coagulum of blood is invariably found to occupy this cyst, and to be attached by small processes to the surrounding tissue.

When these tumors are dispelled by ordinary means, this coagulum of blood is probably often entirely absorbed, since no hardness, or enlargement of the part, remains. But if the inflammation is allowed to linger in the part, or by ordinary exciting causes is often repeated, additions are occasionally made to the coagulum, and this becoming organized, and finally in itself indolent, the second variety of the disease results.

The structure of an inflamed hemorrhoidal tumor is very analogous to certain healthy, vascular and erectile tissues, met with in other regions of the body. It bears, for instance, a strong resemblance to the texture of the spleen, when its contained blood is washed out. It still more strongly resembles the tissue of the corpus spongiosum urethræ.

It is now, I believe, an established principle in physiology that, in the circulation, the blood, in leaving the extreme arteries, is in part poured into the proper tissue of each organ which it nourishes, and is again absorbed by the extreme veins and restored to the circulating current. In inflammations this takes place in a preternatural degree. From the anatomical character of these tumors it is a just inference that, in their production, the submucous texture, being forcibly injected with blood, becomes hypertrophied, and assumes the character of a morbid erectile tissue. After being often strongly distended with blood, some of the cells become ruptured and at length a cyst is formed, in which, as the blood often lingers for some time, this fluid finally becomes coagulated.

The second variety of hemorrhoidal tumor very rarely exists alone, for being hard and incompressible, it becomes itself the cause of irritation to the surrounding parts, and produces other inflamed tumors, destined perhaps to suffer the same series of changes. The indurated tumor is nearly bloodless, and possesses very little sensibility. Sometimes, when small, they present very much the appearance of warts. They are by no means to be confounded with schirrous tumors, into which hemorrhoids are said sometimes to degenerate.

When the inflammatory hemorrhoids have been several times

repeated, and the coagula deposited have as often been absorbed without the production of the second variety, the distension which the mucous membrane has undergone will cause loose folds of this membrane to be left, ready at any time to receive blood, and to become again distended when the exciting causes shall be repeated.

The second variety of hemorrhoids never bleeds; the first much more rarely does than is generally supposed. In those cases of hemorrhoids in which I have been consulted, not one in twenty has been subject to hemorrhage. Occasionally, however, the epithelium which covers the summit of a hemorrhoid becomes disorganized, and the surface presents something of the reticulated appearance which the interior does. Under these circumstances, when strong and often involuntary efforts are made at stool, blood is forced from them. This takes place especially when the tumors, having descended, become in a degree strangulated by the sphincter. The occasional spasmodic contractions of this muscle have the effect to express blood from them with a great deal of force. Bleeding is, however, not the necessary consequence of this slight disorganization of the summit of the tumor, for I have often seen it where no bleeding had at any time occurred. It is much more frequently seen on the summits of those tumors which are situated within the verge, and which are only seen when an effort is made to force down the rectum.

The third and last variety of hemorrhoidal tumor, is the varicose. This is that variety which truly consists in a dilatation of the veins. They are livid in colour, elastic to the feel, and are easily and instantly emptied of their blood by pressure, and made almost wholly to disappear while the pressure is continued. These tumors occur far most frequently in old persons, and especially those whose veins become unusually developed; they also frequently arise from disease of the liver. They are the varicose hemorrhoids which are by far the most frequent sources of copious bleeding. Often, indeed, when the effort is made to go to stool, a copious stream of blood spirts from the rectum like the evacuation of a liquid stool. Often a pint or more is evacuated in a moment, and these discharges, occurring at intervals, are, in some cases, continued for years.

After death, as the blood recedes from these tumors, they collapse and disappear, and hence they have been far less frequently the subject of anatomical examination than the other varieties, which remain more manifest. They may be injected from the

vena portarum with great facility, and are then plainly seen to be cells resulting from dilatation of the hemorrhoidal extremities of that vein—true varices indeed. These varices, belonging to the portal branches of the plexus hæmorrhoidalis, are always internal piles, and are only made to display themselves externally by a considerable effort of the patient, as if at stool. This is the variety of hemorrhoidal tumor from which Petit often succeeded in taking blood as freely as from other veins in other parts; and this is that the extirpation of which, more frequently than others, is attended with alarming hemorrhage. Ligatures to this form of the disease we might also expect would, in some instances, cause phlebitis and its train of formidable symptoms.

Symptoms.

In the pathological history of these tumors, I have mentioned some of those external appearances and expressions of disease which constitute the symptoms of hemorrhoids. Of these, however, it is necessary that we should speak more particularly. The production of these tumors, and especially the effusion of blood from them, is often preceded by a group of constitutional symptoms, termed the molimina hæmorrhoidalia; they are, a general malaise—a slight degree of febrile excitement—sense of fulness in the rectum—vertigo—and (in those subject to it) headache; these symptoms being almost always preceded by constipation. Such signs of disorder generally disappear at once, so soon as the hemorrhoids appear. If the tumors bleed, relief is given, chiefly by the depletion which results; and if they do not bleed, they effect the same result, less completely however, by revulsive irritation.

Hemorrhoids are often engrafted upon constitutional disease of a chronic character. They sometimes occur in the gouty diathesis. I have known them also to supersede slight rheumatic pains which, for days or weeks before, had been wandering through the system. They not unfrequently occur in phthisis pulmonalis, and then often, for a time, divert the local expression of irritation from the lungs, while, however, the declension ordinarily continues.

The inflammatory hemorrhoids present themselves in every imaginable degree of severity. According to the nature and operation of the causes producing them, they may be gradually induced, or suddenly developed. When they occur gradually, as

they ordinarily do from constipation, the most common cause, the patient's attention is first drawn to the part in the evening, after exercise on foot, and the sensation is that of some small foreign substance, lodged in the anus, and creating slight irritation. A sense of fulness is also experienced within the rectum. The finger being applied to the part, a small tumor, of the size of a pea, is felt. The use of paper, after a stool, causes pain. If the part be examined at this time, a single tumor of small size is ordinarily seen just within the grasp of the sphincter muscle. When additional irritation is inflicted upon the part by exercise—by the passage of hardened fæces—by the action of drastic cathartics, or other causes, other tumors are formed in the vicinity of the first, till perhaps they completely encircle the verge of the anus, each of the natural duplicatures of the membrane becoming converted into a hemorrhoidal tumor. They form, also, within the rectum, creating a painful sense of fulness and distension in the part. Whenever the patient makes an effort to go to stool, the tumors are expelled by the action of the muscles, and drag with them often a considerable portion of the mucous lining of the intestine, engorged with blood, and inflamed. The sphincter then, participating in the irritation, contracts with spasmodic force—prevents the retraction of the protruded gut, and, strangulating the mass of tumors protruded, causes them to become engorged in the utmost degree. They then present the appearance of a cluster of purple grapes, the mass being sometimes as large as the fist, and completely concealing the anus. While thus protruded and constricted, the parts are agonizingly painful. Often the patient will himself return them, but frequently the contact of the fingers for this purpose is so distressing that his resolution fails, and they remain in this condition till medical aid is obtained. Sometimes the membrane covering the reticulated tissue gives way, and blood flows, causing partial relief. When this does not happen, the inflammation of the part becomes very intense, and sometimes even results in sphacelation of the part strangulated, accompanied with symptoms resembling those of incarcerated hernia.

If the fingers are applied to these tumors thus situated and steady pressure is continued upon them for a few minutes, their volume is greatly reduced by the gradual expulsion of their blood; but if they have continued for some little time, a portion of this fluid, in some of the tumors, will have coagulated, and these can by no means be wholly obliterated by pressure.

Persons labouring under inflammatory hemorrhoids, even of

moderate severity, suffer more or less uneasiness whenever they are in the erect position. They walk with difficulty, and find it impossible to ride. Their evacuations are always more or less painful.

Sometimes the irritation of hemorrhoids is imparted by contiguous sympathy to the urinary organs, and especially the parts about the neck of the bladder and prostate gland. Hence arises a variety of spasmodic stricture and retention of urine, even more formidable and distressing than the primary affection.

The inflammatory hemorrhoids, if properly and promptly treated, may wholly disappear, the coagula which are formed being absorbed; but if they are neglected, the coagula become organized, and from time to time receiving additions as the inflammation recurs, they convert the tumors into those of the second variety. The indurated hemorrhoid is hard and incompressible. It contains but little blood, and in itself is not painful, although it inflicts mechanical irritation on the surrounding parts, and is thus the cause of other tumors of the inflammatory kind, also, perhaps, destined to undergo the same changes. The indurated tumor, therefore, rarely exists alone.

The varicose hemorrhoidal tumor is of a dark purple colour, but little sensitive, very elastic to the touch, and capable of being almost instantly dispelled by pressure. It as quickly recovers its former size on the removal of the finger. It feels, indeed, almost precisely like a varix in any other part of the body. Tumors of this variety do not cause much suffering to the patient, although, as I have before remarked, they frequently bleed. The blood of these tumors I have not known to coagulate in them, nor do they undergo any considerable changes, except in form and size, even should they continue for years.

Treatment of Hemorrhoids.

In the treatment of the inflammatory hemorrhoidal tumors, if at their commencement, the patient be plethoric and the pulse active, there can be no hesitation in regard to the propriety of general blood-letting, to an extent corresponding to the urgency of the case. Equally obvious is the necessity for an immediate evacuation of the bowels. This should be accomplished by the oleum ricini, or other mild cathartic, assisted by emollient injections. In the administration of the latter, care must be taken to inflict no mechanical irritation. Cool ablutions should next be practised; the patient should be placed in the recumbent posture,

and mild aliments, which cause the production of soft fæces, should be exclusively taken. When the disease is incipient and slight, these means will suffice.

But if the tumors have existed for some time, and have become hard and very irritable, some efficient local means are necessary. Bleeding directly from the tumors, by leeches, is by some recommended; but the occasional irritation, excited by the bites, is a valid objection. They may be applied, with great propriety, to the parts a little exterior to the verge of the anus. If the parts be particularly sensitive and painful, the application next employed with propriety, is a common bread-and-milk poultice, qualified with five or ten grains of opium. Or we may obtain very soothing effects from the use of a fomentation of poppy heads, hops, or chamomile. A soft sponge moistened in an aqueous infusion of opium, I have frequently employed. These means will sometimes prove sufficient; but more frequently they only allay, in a degree, the distressing symptoms and prepare the way for the incision, or excision, of the tumors.

When the tumors, with a portion of the rectum, prolapse at stool, and become strangulated by the sphincter muscle, they should be instantly returned; nothing is gained by delaying for the purpose of making application of medicated lotions or unguents. They may, however, be dashed with a little cool water, which will constringe and, in some degree, empty their vessels. The operator may then cover the tumors with the fingers of one or both hands, and by gentle and gradually increased pressure, endeavour to express their blood and diminish their volume. This being accomplished, he presses upward the whole mass, and forces it within the sphincter, at the same time exhorting the patient to refrain, as much as possible, from all bearing down efforts which are provoked by the irritation felt, and which are in a degree involuntary. To avoid the immediate re-protrusion of the tumors by these efforts, and to render the return of them more complete, the surgeon should follow them as they recede into the rectum with his finger, and this being deeply introduced, so that the knuckles shall press upon the parts around the verge, is to be held there until the irritation caused by the operation subsides in a degree, and the volume of the tumor is still further diminished by the pressure thus caused, and by the relief of the strangulation. The operator should then gently and slowly withdraw the finger, and instantly apply to the anus and perineum a soft elastic sponge, dipped in cool water, or

the infusion of opium. This should be kept gently pressed upon the part, by the hand of the patient, till he no longer feels the tenesmus which threatens again to protrude the tumors. If the bowels have been immediately before freely evacuated, an anodyne may be given, in order to prevent further movements until the parts shall have had time in some degree to recover their natural condition. The patient should then be directed to use only such articles of food as shall produce soft evacuations—these may be mush, buckwheat cakes, fruit, &c. When an alvine movement becomes necessary, which should by no means be delayed too long, an injection of cool water may be administered. The patient should be directed to avoid strong efforts, and, if there occurs any protrusion, to wash the part immediately with cold water—to place himself on his back, and to effect their return at once. When, at length, the hemorrhoids have lost their irritability, there will still occur some temporary protrusion of the membrane, which is now loose and redundant from recent distension. After each stool, therefore, the patient should deterge the part well with a soft sponge dipped in a decoction of oak bark.

If the means already described fail to effect the removal of the urgent symptoms of inflammatory hemorrhoids, it is quite certain that in the principal tumor, or tumors, coagula have formed, which fail to be absorbed, and are now the source of irritation. In spite of all ordinary application, therefore, the tumors will persist until perhaps they assume the character of the indurated, the inflammation having been from time to time aggravated by the usual causes. Under these circumstances nothing but the knife can be expected to give permanent relief. A more simple operation than extirpation will, however, in most cases suffice—an operation the object of which is the removal of the coagulum which will invariably be found to occupy the centres of the principal tumors. To effect it, a common bleeding lancet is the only instrument required.

The patient should be directed to place himself in the posture in which he is accustomed to have his evacuations, and to make the usual expulsive efforts, (the bowels having been, some hours before, properly evacuated.) The tumors which are external, are then so distended as to be rendered prominent, and those which are within are thrust into view. The largest of the tumors are then to be seized between the thumb and finger, and being made tense by pressure, are to be laid freely open longitudinally, each with a single thrust of the lancet. The continued pressure

of the thumb and finger will then expel the coagulum from the tumor. The removal of the coagula is not the only benefit which results; there necessarily occurs some bleeding, and a new excitement in the part results from the incision. The smaller and less inflamed tumors, being dependent on the larger, disappear on the removal of the latter. A poultice should be applied after the operation, and perfect quiet enjoined. It will be inferred that I would never perform this operation when the parts are in their most highly inflamed condition. No serious hemorrhage need be dreaded from these incisions.

When, after the disappearance of hemorrhoidal tumors, either with or without incisions, loose redundant membrane is left, ready to favour the reproduction of tumors, these folds should be cut away with scissors, close to their bases.

My own experience and observation have brought me to the decided conviction that inflamed hemorrhoids ought never to be extirpated, either by the ligature, knife, or scissors; because, although such operations may be effectual, they are painful, not a little hazardous, and unnecessary, for I have seen no instance in which incision has not been effectual.

When, after the operation, cicatrization has been completed, astringent lotions or unguents may be resorted to. The best application which I have ever employed for this purpose, is an unguent composed of lard ʒ i; very finely pulverized galls ʒ i; an equal quantity of powdered opium; and of the ung. hydr. ʒ ij. With this compound the parts should be well anointed, morning and night, a small quantity being introduced within the rectum.

The second variety of hemorrhoidal tumor, the indurated, can be successfully treated only by extirpation. Being but little vascular or sensitive, but little pain or hemorrhage attends their removal, especially since they are usually attached by a small neck, or pedicel. They are best removed by the knife, or scissors. Under no circumstances should the ligature ever be resorted to for the removal of any form of hemorrhoidal tumor. No torture can be more intolerable than that which it often inflicts, and especially when applied, as it often is, to parts inflamed and morbidly sensitive. Petit relates two cases in which, from the use of the ligature, symptoms resembling those of strangulated hernia resulted; and Kirby, in his "Observations," relates one in which the same agent produced tetanus and death.

Hemorrhage of a very formidable character, and sometimes fatal, occasionally results from the extirpation of inflamed hemor-

rhoids by the knife. Should such an operation be preferred to mere incision, I would remark that, where bleeding does happen, it is most dangerous when, an internal tumor having been removed, the blood is poured into the rectum and colon. The signs indicating this concealed hemorrhage should be carefully borne in mind; they are faintness, pallor, distension of the belly, sense of heat and weight in the abdomen. An efficient method of arresting it is practised by the Parisian surgeons, and consists in tying a large cylinder of lint around the middle, with a double ligature, and introducing it into the rectum, so that when the thread is drawn downward the cylinder shall place itself transversely, and make pressure from within outward, rather than escape. Another pledget is then to be placed on the outside of the anus, and the ends of the ligature being firmly tied upon it, all the lower part of the rectum will be closely pressed between the two compresses. Another method is to introduce a portion of the intestine of some small animal, or a bladder, and then to strongly inject it with cold water. Sponge is often introduced, dipped in a cold solution of alum. Dupuytren always anticipates hemorrhage by the use of the actual cautery, instantly after the operation. It must, however, prove severely painful, and be occasionally followed by serious irritation. In France it would appear that hot irons produce no pain, but in this country, for some reason or other, they produce very uncomfortable sensations.

The treatment of varicose hemorrhoids is extremely simple. Their removal by knife or scissors should never be practised, both on account of the formidable hemorrhage which often results, and the danger of producing phlebitis, as often results from the excision of varices from the leg. For the cure of varicose hemorrhoids it will often be necessary to direct our remedies to the liver—to modify the habits of the patient, and to enjoin exercise. The most effectual local application which I have used, is the astringent unguent directed above, persevered in for a considerable time. Various astringent lotions may with propriety be used. I have employed the nitr. argent. with decided benefit, but it produced severe irritation. Pressure by the rectum bougie, is confidently relied upon by many;—the instrument may be medicated with astringents. Howship recommended the metallic bougie. The bowels should always be kept soluble, as nothing can be more mischievous in this variety than severe straining at stool, to effect the evacuation of hardened fæces. When exercising, the patient should wear an elastic compress, kept snugly

applied by a T bandage, to the circular part of which a scapulary is also attached, to render the pressure more firm and constant.

When hemorrhoids appear to be a local affection engrafted upon constitutional disorder, and when, especially, we have reason to suppose that they have superseded some more formidable affection, such as phthisis, or some form of cerebral disease, we may well question the propriety of suppressing them. When, however, they become severely distressing, palliatives may at all times be used. But in most cases, where disease of some important organ has not preceded them, and apparently given place to them, we may attempt the radical cure, using the precaution to establish, at some other point, some less annoying revulsion.

The assertion of Mr. Ribes, that internal hemorrhoidal tumors often result in the production of fistula in ano, by bursting into the rectum, is by no means confirmed by my experience. I do not recollect a single case of fistula in which such was clearly its origin.

ARTICLE III.

Cases in Midwifery. By RICHARD H. THOMAS, M.D. Lecturer on the Principles of Obstetric Medicine, Baltimore.

CASE I. *Shoulder presentation in which turning was rendered difficult by a rigid spine.*—June 1827, I was requested by a medical friend to visit this case with him. The patient had been in labour some hours before he was called. The waters had been discharged, and the shoulder presented at the upper strait. He attempted to turn, but was prevented by the violent contractions of the uterus, his hand being so cramped and paralyzed, that he was forced to desist. He gave a large opiate in order to lessen the strong uterine efforts, and came for me.

We found her under the influence of the opiate, and the uterus comparatively quiet. On attempting to turn, my friend was again obliged to withdraw his hand, so firmly was the uterus contracted on the child. At his request, I then sat down and introducing my right hand very slowly, succeeded with great difficulty and at an expense of severe pain to my patient and myself in bringing down one foot. A fillet was placed around the ankle, while I passed my hand up in search of the other. With almost equal difficulty this was seized and brought down into the vagina, and we imagined that our most formidable obstacles were overcome.

An unexpected one now offered itself, the fœtus refused to turn. The shoulder had been elevated from the strait into the left iliac fossa so that it presented no impediment to the descent of the child. Without being able to explain the difficulty, we were obliged to overcome it by force. By great exertion we succeeded in delivering our patient, and then the difficulty was explained. The fœtus belonged to the class of anencephalus monsters: the vault of the cranium with the arch and spinous processes of the vertebræ were deficient, and the spinal column throughout its whole extent was rigid and inflexible;—hence the obstacle to turning.

The day following, our patient had fever, and somei nflammatory symptoms made their appearance; but they were relieved by bleeding, purgatives, &c. and she did well.

We regretted that we were not permitted to examine the child more minutely than we could do by an external inspection.

In reflecting on the case, we congratulated ourselves that in the violence we were obliged to use, no injury accrued to the mother. A laceration of the uterus under the circumstances would not have surprised us.

Case II. *Twins, turning the second child, Hemorrhage.*—May 1st, 1831, Emily —, aged 16 years, was delivered naturally, the vertex presenting, of a large child. Placing my hand on the abdomen, it was evident that there was another fœtus, and after waiting half an hour, no pains returned, but there was considerable flow of blood. The fœtus did not present at the superior strait. Frictions were used over the uterine region, but no regular contractions were induced, and the hæmorrhage continued. One hour after the birth of the first child I introduced my right hand with ease into the uterus without encountering the fœtus. Carrying my hand to the left side, I found it enveloped in its membranes, ruptured the membranes between my finger and thumb, brought down the feet, and pains coming on, she was delivered without difficulty of a living child. Two distinct placentæ connected by thin membranes, were soon afterwards expelled, and the hemorrhage ceased.

This case is a little singular, in that after the birth of the first, the second child, or its membranes showed no disposition to present at the upper strait, and when the hand was introduced, the uterus seemed to be divided by a longitudinal contraction into two compartments, in one of which the fœtus was found. As respects the practice the indication was clear.

Case III. *Shoulder presentation, internal Hemorrhage, &c.*— My friend Dr. J. L. Webster requested me to see this case, Dec. 28th, 1833. The patient was a robust coloured woman about 37 years old, who had had many children.

I received the following history of her case. She was seized with labour pains two days before, and a granny was called, who ruptured the membranes. All pains immediately left her, and she has been quite easy ever since. Dr. W. was sent for, and finding some obscurity about the case asked my opinion. I saw her with him about twelve o'clock. She was laying perfectly easy; the uterine tumour was large and firm.

On making an examination per vaginam, the os tincæ was dilated, and above the brim I thought I discovered the breech of the child and the funis feebly pulsating beneath.

We agreed that Dr. W. should watch the case and report progress. About two o'clock I got a hasty summons, with the information that pains had come on, and that a hand had come down. When I arrived I found the left hand entirely without, the arm in the vagina and the shoulder firmly wedged in the upper strait. The pains were strong and propulsive, and it was determined that I should turn. Pulsation in the cord had ceased.

On attempting to introduce my hand, such violent contractions were induced as to oblige me to desist, after many cautious but persevering efforts. As the pains were very strong and expulsive, and the pelvis evidently well formed and large, and the shoulder apparently descending, we determined to wait some time to see if any change would occur, believing also that the violent uterine action would soon exhaust itself, and that then turning might be resorted to with a prospect of better success. In the meantime our patient's pulse was good and her countenance cheerful.

At six o'clock, no favourable change having occurred, and the uterine contractions continuing strong and very painful, we administered a large anodyne. I left her for a short time, my friend continuing with her. A little before eight I returned and found her condition much changed. The pulse from being firm had become weak; the skin was bathed in moisture; the countenance was sunken, and the pains were feebler. Fearing a rupture of the uterus, I placed my hand on the abdomen, but found nothing to confirm my fears. Hemorrhage must have occurred, but there was not the least external flow. I determined to deliver without delay. Providing my friend with a dose of ergot to be administered as soon as the turning was effected and some cordials I carried my left hand into the uterus without much difficulty. It there

encountered the separated placenta and a quantity of coagulated blood. Passing it through this, the feet were reached and brought down into the vagina, the shoulder having been elevated and carried towards the right iliac fossa. The ergot was administered, contractions came on and in a little time, the child, placenta and coagula were expelled. As she seemed faint, a tea spoonful of raw brandy was given and she drank a little wine and water. The hand was placed over the uterine tumour and diligent frictions used. The organ contracted but not so firmly as usual. The moment the pressure was relaxed, that moment the uterus enlarged and though renewed pressure would reduce it again, it never was reduced to its natural dimensions after labour. In the meantime there was little or no external flow, but our patient continued very prostrate. Another dose of ergot was administered, and cordials such as wine and water, carbonate ammonia, occasionally brandy, were given, and for a time her strength seemed to rally. Constant pressure by the hand was kept up over the uterine tumour for more than two hours, and afterwards by means of a compress and firm bandage. Vomiting now came on with sinking spells; mustard was applied, and brandy and opium given—the ammonia repeated. Every exertion was made to rally the sinking powers of life but in vain, she lingered till five next morning when she died.

After the delivery, comparatively little blood was lost. The concealed hemorrhage had been so great that she could not recover from its effects.

This case in many of its features is very similar to case clviii in the 2d vol. of Ramsbotham's observations on midwifery, and like it, presents an instructive lesson to the practitioner. It is to be regretted that more care was not taken in the first instance to ascertain certainly the presentation, as it is possible that turning might have been more readily accomplished at that time. To have ascertained the true presentation, it would have been necessary to have introduced the whole hand, but this should always be done where there is any doubt.

Again we have high authority for the practice which was pursued in this case; Denman, Blundell, Merryman and others recommend that when violent contractions of the uterus oppose the introduction of the hand, "we should wait till the organ wearied with its own efforts, either ceases to act or acts with less violence," at the same time to administer large opiates. Yet while we are waiting, rupture of the uterus, or internal hemorrhage may occur.

If we persevere in our attempts to deliver, we may bring to pass the very evils we wish to avert. We have but a choice of evils—to choose the least is our duty. Under similar circumstances I should still be disposed to rely upon large opiates and time, rather than by violent efforts to reach the feet, endanger the integrity of the uterus.

Case IV. *Miscarriage, concealed Hemorrhage before the rupture of the Membranes.*—March 16, 1834. I saw Mrs. L. in the sixth month of her first pregnancy. She complained of pain in the uterine region and a sense of tightness and distress in the organs which felt remarkably hard, even during the interval between the pains, during which the hardness does not perceptibly increase.

I took from the arm twelve ounces of blood, the pulse being full and firm, and ordered a dose of oil and laudanum. In the evening enemata of starch and laudanum were given, and a sinapism applied to the spine, my design being to prevent what I believed to be threatened—a miscarriage.

17th. She feels better this morning, having passed a good night, has less pain, the womb does not feel so hard, but on one of its sides there is a lump, evidently caused by some irregularity in its development. At ten A.M. true uterine pains came on, and at two P.M. the waters were ruptured and the fœtus of six months expelled, the breech presenting. The placenta speedily followed; upon inspecting it, there was found on its uterine surface a large firm clot, weighing more than a pound. The cellular structure of the placenta was entirely destroyed by pressure, except a portion, an inch in diameter, which had continued attached till the end of the labour. The hemorrhage had plainly occurred before the labour, and the blood had been poured out between the uterus and the placenta, where it had been retained by the adhesion of the membranes.

Not one drop of blood was lost until after the expulsion of the child, and then only in the form of a firm coagulum, lodged, as I have described behind the placenta, the uterine surface of which presented quite a concavity. The patient did well.

It is strange that Velpeau* should be disposed to deny the occurrence of concealed hemorrhage before the rupture of the membranes. That it does happen rests upon testimony which cannot be gainsayed. Several very interesting cases are detailed in the Lancet, for 1829–30, by Mr. Coley, and the appropriate plan of

* Velpeau's Midwifery, page 371.

treatment laid down. Mr. Ingleby and others also relate similar cases, but I am not aware of any which occurred so early as the sixth month of utero-gestation, at which period it might be supposed the uterus would resist any sudden distension more than at the full term.

Case V. *Twins,—Hemorrhage after delivery.*—Mrs. F. who lived six miles in the country, had usually very tedious severe labours, followed by flooding. She was taken in labour for the fourth time, Aug. 23d. 1834, and sent for me. I found her as follows. After a labour of four hours, she had been delivered of twins, about forty minutes before my arrival. Violent flooding immediately ensued. It still continues, though in a less degree, her pulse is very feeble; countenance exsanguined; frequent faintings; uterus large and soft, placenta retained. A tea spoonful of raw brandy was given. Frictions and grasping the uterus alternately caused it very soon to expel coagula, and an immense placenta—a single one with two cords. She seemed very faint, another tea spoonful of brandy was given. Cold to the vulva, continued pressure and frictions over the uterus, arrested the hemorrhage. As soon as the pressure was moderated, again the uterus relaxed. A dose of secale cornutum was given. In fifteen minutes the contraction was so firm as to allow me to remove my hand, and the organ did not again become relaxed. A compress and firm bandage were applied, and the hemorrhage did not return.

The good effects of frictions and grasping the uterus were here signally manifest. These means will in a majority of instances of hemorrhage after labour succeed. I have not for years been obliged to introduce my hand into the uterus, either to arrest hemorrhage, or to remove the placenta: that it is very rarely indispensible I am convinced. The efficacy of the ergot in giving tone to the contractions cannot be doubted by any one who will take pains to get a good article and give it a fair trial.

Case VI. *Puerperal convulsions relieved by the long Forceps.*—May 13th. 1834, I received a message from Dr. Jones of this city, requesting my immediate attendance with instruments. The case was that of a young woman with her first child. She had been in strong labour for six hours, when she was seized with a convulsive fit which lasted fifteen minutes, from which she had partially recovered when I arrived. The pulse was full and hard and the countenance flushed; she complained of headache. A vein was opened in each arm, and about two pounds of blood was taken. While the blood was flowing she had another strong fit, and on making an examination, the head was found firmly engaged in the

superior strait, the occiput looking backwards. The waters were discharged and the os uteri well dilated, as were the other soft parts. The pains were regular but not very expulsive.

Under these circumstances, we agreed that it would be best to expedite the delivery by the forceps. Though the head was high up, the long forceps of Baudelocque, as modified by Dr. Dewees, were applied without difficulty. Advantage was taken of the pains which still continued to act with them; yet so firmly was the head wedged that I was obliged to exert much strength to make it descend, and nearly one hour was consumed in completing the labour. The perinæum was much elongated but not injured, the head of the child being very large. The placenta was soon expelled, and our patient did well. As frequently happens in cases of ecclampsia, the child was dead.

There was no recurrence of the convulsions. In puerperal convulsions, the indication, after unloading the blood-vessels, is to deliver as soon as it can be done with safety to the mother. In a case like the above, the long forceps is the only means which gives the least chance to the child. Were we deprived of them, we should in an urgent case be obliged to employ the perforator; the short forceps would be utterly useless.

ARTICLE IV.

Observations on the Distilled Water of the Prunus Lauro-Cerasus, in Facial Neuralgia. By E. S. Bennett, M.D. of Charleston, South Carolina.

In the Baltimore Medical and Surgical Journal, for July, 1834, my attention was arrested by an article written by an Italian physician, (Dr. Broglia,) highly extolling the remedial virtues of the cherry laurel,—prunus lauro-cerasus, in neuralgia. This article of Dr. B. was gratifying to me, as I have had some experience in the use of the article in several forms of nervous affections, and have been pleased with its effects. The form in which I had used it, however, was in tincture. The preparation recommended by Dr. B. is very simple, and can be employed with perfect safety. I took some trouble in procuring the article, and resolved to try its effects upon any case falling under my immediate care. I am now gratified in being able to offer the results of the experiments, assured that this medicine will be found

highly serviceable in relieving suffering humanity from some of its severest pangs.

Case I. On the morning of 10th November, 1834, I was requested to see a lady of nervous temperament, who was suffering severely from violent pain of the face and teeth, and which she attributed to some diseased molares on the side affected. After examination, I was assured, from the symptoms, &c. that her disease was not odontalgia, as at first supposed, but that it was a violent facial neuralgia. The pain was not continued, but periodical. It extended from near the external meatus, along the course of the nerve, to the alæ of the nose, the corner of the mouth, the external cauthus of the eye, and over the temple, to the forehead. Sometimes, also, a pang would seize her near the inferior border of the eye, and with the rapidity of lightning, run down the side of the nose, along the teeth, and thence to the temple. From these circumstances I inferred that the disease was located in the portio dura, and the second branch of the fifth pair, or trigeminus. This lady had been suffering with this affection, at every change of weather, for three years. The present attack had been constant for several weeks, and at no time was she entirely free from pain, more or less severe. The pain was, however, generally very violent from about 4 P.M. until near the middle of the following day. It may not be amiss here to mention that she had, for several years, suffered from dyspepsia, which had greatly undermined her general health. Not regarding this latter malady for the present, I directed my attention to the immediate relief of this very painful affection. Accordingly I sent her the following:—R. aquæ. distil. lauro. ceras. ℥ iv; ether sulph. ℥ i; extract. atro. belladon. ʒ i; ft. lotio. the painful part to be covered with a compress of carded cotton, wet with this mixture, and repeated whenever it became dry. These directions were carefully followed, and at my next visit, 7 o'clock P.M., she had applied six compresses. She was at this time more free from pain, but suffered from extreme tenderness of that side of the face. Directed the lotion to be repeated.

Nov. 11th, 10 o'clock A.M. More free from pain, and the tenderness of the face but trifling—had enjoyed six hours of very quiet and refreshing sleep, and had used three applications. 7 P.M. free from pain and soreness of the face, and expressed an earnest desire to remove the applications. They were, however, followed up, pro re nata, through the evening, and from that time she has not experienced any kind of inconvenience.

Case II. A gentleman called on me, suffering very greatly from violent pain in his face and teeth, for which he had had several teeth extracted, but without relief. His sufferings were very severe; and, as the portio dura was manifestly the seat of disease, I resolved to test the question, whether the cure depended upon the lauro-ceras. alone, or upon the narcotic power of the atrop. belladonna. I gave him, therefore, the following:—R. aq. lauro-ceras. ʒ iv; eth. sulph. ʒ i; ft. lotio.: a piece of cotton wadding, large enough to cover the face, to be wet with this mixture, and applied to the face, and renewed as it became dry. This case came under treatment on 1st December, 1834.

This gentleman called on me on the morning of the 2d December, without any application to his face, and stated that he was as free from pain as he had ever been in his life—and from that time to the present has enjoyed an uninterrupted course of health. In this case, it will appear that the lauro-cerasus was as effectual as when combined with the atrop. bella.

Case III. A lady of nervous temperament called at my office, on 20th December, 1834, suffering, as she supposed, from violent odontalgia, of some standing, for which she requested the extraction of several molares. Differing from her as to the nature of her disease, I declined extracting her teeth. This lady had been treated for this affection, by a highly respectable practitioner of our city. Bleeding and free purgation, cataplasms, leeches, warm fomentations, &c., were resorted to without relief. Hearing of the success of Case I, she placed herself in my hands. Upon a careful examination I traced the following symptoms; violent burning pain arising a little below the orbit of the eye, and extending down the side of the nose to the upper lip and teeth, thence outward and upward to the temple, and the anterior face of the external meatus, downwards to the ramus of the inferior maxillary, and forward and inward to its symphisis. At times the tongue also participated in the suffering. I inferred the disease to be located in the second and third branches of the trigeminus. I directed the following: R. aq. lauro-ceras. ʒ iv; sulph. eth. ʒ i; to be used as in preceding cases. At the expiration of sixteen hours she had experienced some mitigation of the severity of suffering, but still experienced considerable pain. I directed the lotion to be repeated, with ʒ ss. extract. belladonna.

Dec. 21, 5 P.M. My patient was very much relieved from suffering, but complained of soreness, &c., over the surface of the

skin, which gradually subsided, and in the course of three days was perfectly cured.

I could go on to the recital of several cases more, of similar character and results, but I deem these sufficient to test the virtues of the remedy, which I confidently recommend to the profession.

The preparation of the distilled water of the prunus lauroceras. which I have used, was prepared by Messrs. Caulin & Harper, of this city, who assure me that the water of the first distillation is what they have prepared for me, which is fully adequate to the purposes intended. Indeed, no benefit could be experienced by a further distillation, as the oil which would float upon its surface could not with propriety be resorted to.

Charleston, March 4, 1835.

[It is matter of regret that the prunus lauro-cerasus, which is undoubtedly a valuable article of the materia medica, is not indigenous to our country, and cannot be obtained, except sparingly, from gardens and green-houses, for medicinal use. We are inclined to believe, however, that the prunus Caroliniana, or, as it is commonly called, "*wild orange*," which grows extensively in the Southern states, possesses the same virtues, and might be substituted for the foreign plant. The efficacy of the latter is known to depend upon the prussic acid it contains, and our lamented friend, the late Stephen Elliott, Esq. of Charleston, remarks of the former, "that its leaves are very poisonous, and frequently, in the spring of the year, destroy cattle that are tempted to browse freely on them."—*Sketch of the Botany of South Carolina and Georgia. Vol. i.* 540, *Charleston*, 1821.]

EDITOR.

ARTICLE. V.

Case of Rupture of the Uterus. By A. DUNAN of Baltimore.

I WAS called, on the 17th of March, at 6 o'clock, P.M. to visit Mrs. H. R. aged 38, whom I found affected with slight labour pains. As there was no prospect of delivery being accomplished immediately, I prescribed an anodyne, and visited her again at 10 o'clock.

The pains had increased, and were now very strong. On examination the os tincæ was found well dilated; there was a natural

presentation of the head of the child, and every thing seemed to afford a prospect of speedy delivery. About 12 o'clock at night, a sudden cessation of pain took place, attended with rumbling noise in the abdomen. I proceeded immediately to make an examination per vaginam, and was astonished to find a disappearance of the fœtus. Suspecting that rupture of the uterus had taken place, I made an effort to introduce my hand, with the object of searching for the feet, but found the os tincæ so firmly contracted, with a margin of the placenta presenting, that I could not succeed. Mrs. R. continued to experience aching pain in the region of the uterus, until the 19th, at 4 P.M. when she expired.

Sectio Cadaveris.—When the cavity of the abdomen was laid open, a rupture was found occupying the right wall of the uterus, about an inch and a half or two inches above the os tincæ. The child had passed through the rent, and was found lying with its head towards the left abdominal wall of the mother, and its breech towards the right side. The wall of the uterus, on the right side, was much thinned, while the fundus, and the left side were thickened—the whole being in a diseased condition, which had probably existed for some time. The os tincæ was flaccid and rugged, and was likewise in a morbid state.

Mrs. R. had been the mother of four children, all of which were born dead, and on the occasion of the last accouchment preceding the one which terminated fatally, I found the uterus thickened upon one side, and apparently diseased.

I have communicated the case for publication, as one of not very common occurrence, and therefore submit it to the consideration of such of my professional brethren as may deem it worthy their notice.

Baltimore, March 20th, 1835.

SELECTED PAPERS.

Lecture on Continued Fever, by Wm. Stokes, M.D. *delivered at the Medical School, Park street, Dublin.*—Session, 1833–4.

I do not know any disease which it is so difficult to lecture on as fever, as it is almost impossible to give such a description of it as will apply to all or even to the majority of cases. It is very true, its characteristic symptoms are generally present, but nevertheless, its varieties are almost infinite, (if I may use this word.) It varies according to habit, temperament, situation, climate, season, peculiar character of the epidemic, and the numberless complications of local disease. I have already informed you that fevers are general affections of the system, when essential or idiopathic; but are more frequently complicated with local disease in the great cavities, the head, chest, or abdomen; and that many local lesions may exist simultaneously. In some cases they appear very early, but in general they come on during the state of excitement, when the blood is circulated with increased energy, and consequently any organ which is predisposed to disease will be likely to become congested or inflamed. Thus, one patient will suffer from head symptoms, another from affections of the chest, a third from abdominal lesions; and hence the diversity of the symptoms. I have often illustrated this pathology at the Meath Hospital. Indeed, you will scarcely see any two patients affected alike, and this is readily accounted for by the difference of constitution and predisposition to disease. In some instances local lesions are confined to one physiological system, or even to one organ; in others they occupy all the large or splanchnic cavities. The best mode of investigating fever is, to examine the symptoms of what is called typhus, and then to review fever of a nervous type, whose symptoms are chiefly referable to disease in the brain and spinal cord, with their respective nervous connexions; next to notice those fevers in which the respiratory system is affected; and lastly, those in which the digestive canal is chiefly engaged.

The symptoms of typhus may be divided into two classes, the precursory or latent, and the actual or manifest.

The precursory are languor, lassitude, and prostration of strength, a feeling of malaise, without decided pain, sense of chilliness, or coldness along the spine, amounting to shivering or rigors, a sense of weight or confusion of the head, indifference to business or pleasure, disturbed or unrefreshing sleep, frightful dreams, nausea, coated tongue, loss of appetite

confined bowels, and abdominal urine. These symptoms continue for three or four days, but in some cases the phenomena come on with great rapidity. This is the case during the prevalence of epidemics, or when the miasm of fever extends its influence over a number of persons crowded together as in gaols or camps. These symptoms have led some to term this stage one of debility; and it certainly bears a close resemblance to the cold stage in intermittent, except that the symptoms are not so violent.

But in some cases typhus is ushered in with symptoms of inflammation. We find the pulse strong and full, the skin hot and dry, the tongue coated, great thirst, and what many would call symptoms of inflammatory fever. The medical attendant employs bleeding, but this very seldom stops the disease. It may modify symptoms, but it will not arrest the complaint. It is a very important question how far bleeding is necessary in typhus, and this I shall fully examine when describing the treatment. Some allege that the blood is redder than usual, and buffed, and in other cases the clot is of a dark color, easily broken up, and unbuffed. It is important to inform you that, whether bleeding is employed or not, the pulse begins to change about the third or fourth day, and all signs of inflammation disappear.

A train of nervous symptoms now come on, such as anxiety, restlessness, intense pain in the head, tinnitus aurium, throbbing of the temporal and carotid arteries, suffused or ferretty redness of the eyes, more or less delirium, dry, brown tongue, laborious breathing, urine scanty, and alvine dejections depraved. The symptoms are increased towards the evening. In general the symptoms are diminished towards the morning, or to speak technically, there are remissions in some cases; the symptoms are aggravated on alternate days, so as to resemble a double tertian. In general the skin is dry, though I have had cases under my care in the Meath Hospital, in which there was profuse perspiration, and these were usually tedious. In the majority of cases, however, the skin remains dry through the whole course of the disease. There is another symptom very common in fever in this country, and that is, the appearance of purplish spots on the skin, technically called petechiæ. We seldom see this appearance in inflammatory fever, or when fever is symptomatic of local disease; and it is very seldom seen in any of the London hospitals. This is ascribed to the difference of diet in the different countries. Petechiæ may appear very early, but are generally observed towards the close of the disease. We very rarely see petechiæ in cerebritis, pneumonitis, or gastro-enteritis. But it is very remarkable, that when these diseases are excited during the progress of fever, petechiæ are extremely common.

As the disease advances, prostration of the vital power is more manifest. The features are collapsed, the patient sighs frequently, or he is

in a state of stupor; the pulse is small, soft, and easily arrested; the eyes are glazed, red, and suffused with tears; questions are answered with impatience; the nostrils are obstructed with mucus, and frequent attempts are made to remove it; deafness comes on; the features are sharpened, the tongue is dry, brown, sometimes almost black; the lips and tongue are chapped, and covered with a brown sordes; there is an inability to protrude the tongue; it may be moist throughout the whole disease, or red and tremulous, and in the latter case there is generally gastro-intestinal irritation. It is, however, a well known fact, that we may have the last disease without the state of the tongue just mentioned. If you were guided by the state of the tongue alone in fever, you would be frequently mistaken. I have stated on a former occasion, you should observe the tongue in fever more as an indication of the general state of the system than of the state of the gastro-intestinal mucous membrane. In fact you may have extensive disease of the membrane without any change in the appearance of the tongue, and the reverse. I have seen extensive disease of the mucous membrane of the digestive tube, without any morbid condition of the tongue. Experience has also confirmed the fact, that the tongue when red, dry, and chapped, will turn pale, and become moist after the exhibition of wine, ammonia and stimulants; but this is not always the result. Now, in such cases were you to judge from the state of the tongue alone, you should suppose there was gastro-intestinal irritation or inflammation, and that stimulants would prove injurious. In idiopathic enteritis, stimulants would unquestionably aggravate the disease.

In general there is thirst, and the patient wishes for cold, though sometimes for warm drinks. There is sometimes a perspiration, or clammy sweat, with a peculiar odour; there may be diarrhœa, though in general there is constipation. Towards the end of the disease, the abdomen swells suddenly, and becomes tympanitic, or it may become soft and flaccid, and pressure may or may not remove the pain. The state of the urine varies very much, and scarcely affords any diagnostic signs. But you should always remember that the bladder may be distended, and require the use of catheters for twelve or fourteen days, or even more. In other cases the urine and fœces are passed involuntarily. This occurs during sleep at first, but after some time while the patient is awake. It is manifest that all these symptoms shew that the whole functions are very imperfectly performed.

The sinking or state of prostration is called by some the stage of collapse; and when this is fairly established, which it generally is from the twelfth to the fifteenth day, the patient lies on his back, with inferior extremities drawn up and separated, and his trunk is frequently sliding down in the bed; deglutition and respiration become more and more difficult; the eye is dull and vacant; the eye-lids are half closed, and

the eye-ball is turned upwards; the pulse sinks, is irregular or intermittent; hiccup comes on; there are subsultus tendinum, convulsive motion of the muscles of the face and different parts of the body, and hemorrhage of the mouth, gums, nose, stomach, bowels, or bladder. The extremities become cold and covered with a viscid sweat; bad sores appear on the hips and loins, and these are surrounded by erysipelous, and then become mortified; the hiccup increases to a distressing extent; the eye is glazed, the jaw falls, the features change and become hippocratic; convulsions or stupor comes on; a tracheal rattle sets in, and the patient, before dissolution, exhibits a most distressing scene of misery.

Such are the principal symptoms of typhus, but they vary in different cases. It is also clear that the prognosis must vary. In general, when all the body symptoms are present, such as characterize the stage of collapse, the prognosis is unfavorable, but recovery may happen in such cases. The worst symptoms are those which indicate lesion of the nervous power, and also of the fluids. Delirium, coma, subsultus tendinum, spasm, petechiæ, and hemorrhages, are formidable symptoms. It has been frequently proved that the worst form of typhus is caused by a concentrated number of persons being crowded together in gaols, ships, or hospitals. In such cases, we also observe symptoms of local inflammation. The older writers described gaol, hospital, and ship fevers as extremely fatal. I mentioned on a former occasion that, according to the experiments of MM. Gaspard and Magendie, typhoid fever was produced by the injection of putrid matter into the veins of animals. They also observed that the more concentrated the poison, the more closely did the fever resemble typhus, and the more violent and extensive were the local inflammation. We can therefore understand, that if the result be more violent according to the concentration of the poison, why hospital and gaol fevers were so fatal in former times, when there was no attention paid to ventilation, and consider an excess in quantity and concentration in virulence, of the typhus poison, the real cause of the malignance of low fever. We have a further proof of the validity of this conclusion afforded by the fact, that in camp fever, when the camp was broken up, and the army separated into different parties, the fever rapidly disappeared.

There is one symptom on which I wish to make a few observations, before I proceed to analyse all the rest, and that is petechiæ; some suppose petechiæ to be analogous to the exanthemata, an attempt of nature to relieve the disease by revulsion. The general opinion is, that these spots are caused by a weakened state of the capillaries of the skin, and a dissolved state of the blood, and that they resemble ecchymosis. I think there can be no doubt that petechiæ in some cases are analogous to exanthematous diseases. They sometimes occur very early, and before there can be an altered condition of the blood, and they

even give relief. In such cases they form elivations and desquamate like the former disease. It is also certain that we may see them, without any elivation. Quarine divided them into three classes: the red—the livid—and the black. He considers the red the least dangerous, the dark more so, and the black the worst. The red petechiæ only resemble the exanthemata. Petechiæ are generally very small, but they sometimes become large black spots, and are then called vibicies and maculæ, and resemble purpura hemorahagica. They are justly considered dangerous, and prove that the fluids are changed. But the smaller and redder they are, and the earlier they appear, the more favorable the prognosis. Huxham thought they were sometimes critical; but Pringle is of a different opinion. We have sometimes observed them followed by relief at the Meath Hospital, but have not seen them critical. I need scarcely observe, that persons withstand the violence of fever very differently; one may have a good constitution, and another may be a bad subject.

I shall now direct your attention to the predisposing causes of fever. These are numerous, such as all debilitating causes, as grief, fear, care, excessive exertion of mind or body, bad food or air, want of cleanliness, and a humid state of the weather. It was long observed that the inhabitants of crowded towns who reside in narrow, filthy streets, and who are most exposed to impure air, filth, bad food, and excessive labor, suffer the most severely from fever.

Let us next examine the symptoms of fever, and to do this properly we must arrange them in groups—those of the nervous, respiratory, and digestive systems.

With respect to the nervous symptoms, we observe great prostration of strength, and a diminution of all the functions of the body. This prostration cannot be referred to any local cause. It is called direct prostration, to distinguish it from that which follows local inflammations. These prostrations are totally different, for that which follows after peritonitis is relieved by bleeding, while that attendant on typhus cannot be removed by this remedy, but would be aggravated by it. The next nervous symptoms are restlessness, anxiety, insomnolence, and agitation. The worst of all these symptoms is loss of sleep, for when this is present, though all other symptoms may be trifling, the prognosis is unfavorable; whereas, if the patient sleep well, the disease seldom terminates badly. We may also have frequent varieties of delirium, of which furious and low muttering are the most remarkable. The functions of the brain are very much altered, and hence we observe the muscular power disordered, as evinced by convulsive twitchings, pains, spasms, tremors, subsultus tendinum, and paralysis of the sphincters. All these symptoms shew the prostrate condition of the brain and spinal marrow, and also of the muscular system. I stated that in the com-

mencement of the stage of excitement in fever, the action of the heart and arteries is so violent as to simulate the phenomena of inflammation; but in the last stage, or that of collapse, as it is termed, we find a weakened action of the heart, with a soft, weak, irregular, or intermittent pulse, which can be stopped by a slight pressure with the finger. It is also remarkable, that in those persons whose ordinary pulse is irregular, it becomes regular during fever. Again, there may be a difference between the action of the heart and pulse, and this indicates disease of some internal organ. With regard to the alteration in the blood, I can say but little. That the blood is altered during the progress of fever is very evident; but in what the change consists is unknown. The blood appears natural in the early period of the disease, but is changed as it advances. Were we in possession of exact knowledge of the alteration, it would furnish a most important indication of treatment; but after all that has been written on the subject, it remains as obscure as in past ages. Neither do we know, nor can we duly appreciate the alteration in innervation; and here is another link wanting in our pathology, and, consequently, in our treatment. When we consider that a patient laboring under fever for several days (fifteen or twenty) takes little nutriment, adds little to the circulation, that his supply of blood is deficient, that the respiration, innervation, and secretion are all deranged, we are bound to admit that in such general derangement of the whole functions, the blood in common with the other fluids and solids must be greatly altered from its normal condition. This conclusion has led some to broach a hypothesis, that the alteration in, or morbid condition of the blood, is the proximate cause of fever; but I agree with the majority, who think that it is the effect and not the cause of the disease.

With respect to the respiratory system, we find it also deranged, and presenting many symptoms in fever. We need only call to mind the normal condition of respiration to appreciate the abnormal. We observe slow or hurried breathing, cough, dyspnœa and other signs of organic lesion, which are precisely determined by the stethoscope. We may also see laborious breathing arising from disorder of function—a nervous dyspnœa, which auscultation confirms. I have to observe that hurried breathing is, in general, a dangerous symptom in fever. In some instances we have cough, dyspnœa, pneumonia, and spitting of blood; and we can now discover, by means of the stethoscope, the morbid conditions which give rise to them. Whenever the breathing is laborious, difficult, or hurried, there is, in general, some morbid lesion, and in such cases auscultation is of great value. Before the application of this diagnostic, many patients were supposed to have died of fever, but in reality they died of latent bronchitis or pneumonia. It is easy to prove the validity of this statement. Thus, suppose a patient in fever was delirious, and had some cough, the older practitioners would treat the former symptoms,

prescribe for the cough, but they would overlook the morbid state which gave rise to it. He would go on for days, and often without any serious affection of the respiration, or without having complained of the chest; but on dissection, the bronchial membrane or the tissue of the lung would be found inflamed. I would strongly advise you, in all cases of fever where the breathing is affected, to apply the stethoscope, so as to ascertain the exact conditions of the organs and tissues in the chest; and then you will not, like the great bulk of your predecessors, be prescribing for names, but for diseases.

We should next examine the digestive organs, as these are very much affected by fever. The lips are dry, parched, and often chapped, and, as well as the teeth and gums, are often covered with a brown or blackish sordes; the gums are red and dry, the tongue is white, dry or moist, or red and glazed, white or brown in the centre, red at the edges, and sometimes becoming very dry and black; the papillæ may be enlarged, elevated, and prominent, and as the fever advances, there is an inability to protrude the tongue; it, in common with all the muscular system, has its functions diminished. In some cases the tongue remains moist and white, unaccompanied by thirst; but in most cases this last symptom is urgent. The appetite is prostrate, and in some cases there is nausea, vomiting, or hiccup. The patient often requires cold drinks, which he relishes; but others have no thirst, and drink only when requested. There may be bilious or coffee-colored vomiting; the alvine dejections are also varied. These may be fluid, of different colors—brown, black, green, white, or yellow—with an offensive odour, or they may be solid and scybalous. There is also a great tendency to diarrhœa, though constipation is sometimes present. We also notice eructations, or borborygmi and tympanitis; and sometimes jaundice, which is generally an unfavorable symptom. You now clearly perceive the importance of carefully examining analytically in review, the organs in the head, chest and abdomen. Experience and recent investigations have established the pathological fact, that the organs in the head, chest, and abdomen may be inflamed, congested, or otherwise diseased in fever, and that these alterations are the effects, and not the causes of the disease. We cannot assent to the theory of Clutterbuck, that the seat of fever is exclusively in the brain, for alterations in this organ no more explain the nature of typhus than lesions of the respiratory or digestive system. It has been repeatedly demonstrated that the lesions of the brain are by no means constant in their appearance, that there is a great variety in their locality and extent, and that the morbid appearances after death do not always correspond with the symptoms observed during life. If lesions in the brain were the cause of fever, we should expect to find them as invariably as those of the lungs in the fever of pneumonia, or of the digestive system in gastro-enteritis. But this is not the case. Again, there may

be intense headache or delirium in typhus, with slight cerebral derangement; and we meet with extensive disease of the brain in fever, though the nervous symptoms are but slightly marked. We have, therefore, a character which should be present did typhus depend on disease in the brain. We also very often remark, that the symptoms of typhus precede those characteristic of irritation or inflammation of the brain. We often see patients in typhus who go on for days without symptoms of cerebral disease; but towards the termination of their illness, will have symptoms of cerebral disease. The fact is, as I have already endeavored to impress upon your memories, that in cases presenting a similarity, nay, almost an identity of symptoms, there is the greatest possible variety in the nature, seat, and extent of the organic alterations. The same symptoms may exist in two different patients; in some there will be organic lesions, in others none whatever. In fine, we observe the same state of cerebral lesions in those who had no symptom of typhus, as in those in which all the symptoms had existed. If we admit these facts, and I think they cannot be denied, we must reject the theory of Dr. Clutterbuck. The conclusion of the ablest modern pathologists is, that in idiopathic or essential fevers, every nervous symptom may occur independently of any appreciable lesion in the brain, nerves, or spinal cord; that the conditions of the nervous centres cannot explain after death the symptoms during life; and that the nervous symptoms, in particular, cannot be referred in many instances to organic lesion of the brain. It has been long known that the nervous symptoms subside under a plan of treatment which would be destructive if they depended on inflammation of the brain. Thus delirium, coma, subsultus tendinum and spasmodic twitchings, are readily removed by stimulants, such as ammonia, wine, opium, &c. which could not possibly happen had these symptoms depended upon inflammation of the brain or its membranes. Here, then, is a powerful fact against the theory of Dr. Clutterbuck, and one confirmed by the experience of every observant practitioner. I have already shewn the fallacy of Broussais' doctrine, and need not again advert to it.

It is important to state that the nervous symptoms in typhus indicate that the fever is of a dangerous character, though not dependant on organic lesions of the brain or its membranes. There may be slight or severe headache, purely sympathetic of derangement in the digestive tube, but unaccompanied by the usual symptoms of cerebritis or meningitis. It may even be accompanied by throbbing of the arteries of the head and neck, without being caused by cerebral lesion. The age, the configuration of the head, the aspect of the countenance, eyes, &c., will often enable us to form an accurate diagnosis, though there are some cases in which it is extremely difficult, if not impossible, to be satisfied whether the symptoms are purely nervous, or caused by increased vascular action.

The treatment of headache must be modified according to circumstances. In those fevers in which signs of cerebral lesion are absent, and the patient complains of headache, we remove the hair, or at all events have it cut short, and order cold applications. This plan is generally successful, except in those cases in which there is great heat of the scalp, and throbbing of the arteries of the head and neck. The bowels are to be regulated as a matter of course, and a foot-bath, with the addition of mustard or table-salt, is a valuable remedy. When these means fail, we should order the head to be shaved, leeches to be applied behind the ears and over the temples, and very cold or iced lotions to the scalp. These measures in general succeed, and on this account some practitioners suppose that the headache depends on inflammation of the brain or its membranes. But you remember that I stated, at a former lecture on diseases of the brain, that headache did not depend in all or in many cases on arachnitis, but on an increased sensibility of the affected part; and this may be relieved by antiphlogistic measures. It is also well known that headache and delirium may be symptomatic of disease in the digestive system, and that they will yield to leeches applied over the epigastrium. I have known cases in which leeches, &c. were applied to the head with very slight relief; but when applied over the epigastrium, the headache and delirium subsided. It is now a received fact, that of all the secondary irritations in fever, those of the digestive system are the most common, and that there is the closest sympathy between the digestive and cerebral systems. I should, therefore, advise you when you meet with cases of fever in which any part of the abdomen is pained by pressure, or in which there is diarrhœa or tympanitis with headache, to apply leeches and counter irritation to the abdomen, and ascertain whether you can remove the headache by those remedies; and you will find that your practice will be successful in most cases.

The next symptom to be described is delirium, which I am disposed to think cannot be, when taken alone, considered as caused by inflammation. Before I adduce proofs of this position, I wish to allude to the occurrence of hysterical symptoms in fever. I have observed, even in robust men, fits like hysterical in the commencement of fever. The patient had fits of laughing and crying, speedily succeeded by feverish symptoms, and these were followed by profound typhus. In such cases, I am of opinion that the prognosis is generally unfavorable. Let us now consider the nature of delirium. There are two forms of delirium—the violent or ferocious, and the low or muttering.

The high, violent or ferocious delirium, commences early, and renders the patient very unmanageable; the low comes on towards the termination of the disease. Now, there are cases in which the high delirium supervenes towards the close, and the low appears at the commencement of fever, and in such cases there is a deviation from the ordinary course,

and the prognosis is very unfavorable. The older writers on fever looked on delirium as a very dangerous symptom; but more accurate observation has enabled us to know that it is not necessarily a fatal symptom. Louis has thrown great light on this subject, by contrasting the states of the brain in twenty-four patients, twelve of whom had little or no delirium, and twelve had it severely. He places the results of his observations in two tables.

In the first table he placed the morbid appearances of those who had had no delirium; and in four autopsies there was slight redness in the corticle substance of the brain; in one inflammation of the optic thalamus; in one slight softening of the brain, and in the other six the brain was perfectly healthy.

In the second table relating to the lesions in those who had suffered from violent delirium, the following were the morbid appearances. In five the cortical substance was slightly vascular; in one there was slight softening; in one livid injection of the brain and its membranes; in the remaining five, the brain and membranes were healthy. Now, you observe, that the morbid appearances recorded in both tables are so similar, in the cases accompanied and unaccompanied by delirium, that no inference as to the exact condition of the brain, which gives rise to delirium, can be correctly deduced. MM. Louis and Andral have also described four dissections, two each, in which there was induration of the brain attended by delirium, and two without this symptom; and in two there was coma with stupor. From these facts we may justly conclude, that inflammation of the brain does not cause delirium; nor does this last symptom imply any particular affection of the brain. It is right, however, to remember, that inflammation of the brain may, and generally is, accompanied by high delirium; and that low delirium may supervene after the freest use of antiphlogistics in acute inflammation of the head, chest, or abdomen; that the one kind is remediable by depletion and depressing remedies; and the other by stimulants.

In forming an opinion on the cause of delirium, you should observe the age, sex, habit, &c. as in headache; and also determine whether it depends on the brain or some other organ. When you find heat of the scalp, throbbing of the temporal and cervical arteries, flushed face and other signs of inflammatory or congestive action in the brain, you should employ general and local bleeding, with the cold affusion so judiciously advised by Dr. Abercrombie. I have repeatedly known patients who were for nights without sleep, who suffered from such violent delirium, where the strait waistcoat was employed; but these slept soundly after the cold affusion. In such cases I prefer sinapisms to the feet to blisters, which I consider hazardous. In some cases the delirium is so violent that the strait waistcoat is resorted to. This is an objectionable proceeding, and does much more harm than good. Dr. Cheyne states in his Report of epidemic fever of Ireland, that patients have sunk from

exhaustion in struggling with their attendants, and in endeavoring to free themselves from the strait waistcoat. Such restraint is rarely required, and it is much better to allow the delirious patient to get out of bed, walk about the ward, or put on his clothes and sit on the side of the bed, until he becomes quiet and amenable. I think coercion is justifiable only in such cases in which the patient might endanger his life without it.

I stated to you that wine, opium, and other stimulants are administered with advantage, when delirium is present in the last stage of fever. In such cases the tongue will be red, brown or black, dry and glazed, and after the use of stimulants, it will become soft, pale and natural. Now, this fact confirms a position I laid down on a former occasion—that the tongue is rather an index to the state of the whole system, than to any particular part of the intestinal canal. Much diversity of opinion exists as to the use of wine; and it was long supposed that it was improper when the eyes were red and suffused. Dr. Graves holds that it may be given, and is highly beneficial in such cases. He maintains that want of sleep will cause redness and suffusion of the eyes, and that a hot skin with cold extremities, does not contra-indicate the use of wine. He would not advise it in high delirium; but I should be disposed to modify this opinion, and say, it should not be given when the delirium comes on early in fever; but in the advanced stage I have repeatedly seen it do good.

It often happens that the patient is restless, irritable and delirious, and deprived of sleep. In such cases, unless there be determination of blood to the head, we give wine and narcotics with advantage. Dr. Graves well observes, that such a train of symptoms may continue after depletion, purgatives, and blisters, and will yield to opiates. We often succeed by ordering a starch and opiate clyster, composed of two or three ounces of the former, and thirty or forty drops of the latter. The general rule with regard to the use of opium is, that when nervous symptoms continue after the employment of antiphlogistic measures, or when there are no signs of inflammation of the brain, it is highly beneficial. These, and the preceding facts are founded on experience, and not on any theory. There is also another practical conclusion, which is of great importance, and it is this,—that local inflammation in fever is most common in the abdomen, next in the chest, and lastly in the head.

There is another symptom which deserves attention, namely, coma. The patient is in a state of stupor, and sometimes cannot be roused; or he may be roused for a moment, but then falls into his former condition. In such cases, we apply cold to the head, blisters to the neck or scalp, and sinapisms to the feet. Lallemand and Mackintosh mention cases in which boiling water was poured over the lower extremities, and cold applied to the head at the same time, with the best results. We also give wine and musk, when the skin is cool. Such are the sanative means in coma.

I now beg your attention to adynamic fever, or that which is attended with great prostration of the vital powers. Adynamia may be caused by visceral lesions, and removed by antiphlogistic measures; or it may exist without any local inflammation. Now, many practitioners are ignorant of this pathology; and considering debility the cause of low fever, employ stimulants in every case, and sacrifice many at the shrine of ancient dogmatism. It is most essential to decide whether inflammation is the cause, as then proper means must be employed; but should these fail, we must have recourse to stimulants. There are cases in which while you stimulate, you may employ local depletion and counter-irritants at the same time, with great benefit. Here I must remind you of a former remark, that you cannot treat local inflammation in fevers so boldly, as in the idiopathic cases; because you have profound lesion of innervation, and a morbid state of the blood and other fluids. As a general rule, you may bleed in the early stage of fever; but in the advanced, you must prescribe stimulants and tonics. The disciples of Broussais have overlooked this distinction in practice; they considered fever caused by local inflammation, and that stimulants were injurious in any of its stages. They continued the depletory measures, reduced the exhausted strength, being ignorant of the fact, that nutriment may be given to support the strength, while antiphlogistic measures are employed; and that at certain periods of inflammations, stimulants become antiphlogistics. In idiopathic inflammation we cannot continue depletory measures throughout the disease; for after a certain period it loses its effects on the local disease, will weaken the patient if continued, and a cure must be effected by stimulants and tonics. I advise you, even when local inflammation is present in the last stage of fever, to stimulate. It is often difficult to know the exact period when we should change our practice; but this can only be learned by repeated and careful observation.

I shall now place before you an abstract of Dr. Latham's opinions on the use of opium in fever. I must premise, however, that one of the first physicians who tried opium in fever, was the celebrated Sydenham. He observed, that when he gave it after his patient had been purged, it was very beneficial. There is a great diversity of opinion at the present day, as to the administration of this medicine in fever, but there is no doubt that it can be given with advantage in many cases, and will often produce the best effects in the worst forms of typhus.

Dr. Latham observes, "In some cases of fever, the disorder of the sensorium keeps pace with that of other parts; and thus the disease proceeds until it is somewhat advanced, when the harmony between its symptoms is disturbed. Those of the brain outrun the rest. New indications of treatment arise, and if the patient can be saved at all, it must be by opium. Thus the heart and arteries may be full of activity, and every symptom in proportion to it. Remedies are accordingly addressed to the vascular system, and succeed for every purpose they are intended to

fulfil, except one. By venesection, or topical bleeding, the general symptoms are relieved, and each organ loses its peculiar distress, but still the delirium continues. With an improved state of the circulation, and of other organs, this condition of the sensorium remains, and to this subsultus tendinum is liable to be added, and the unrestrained passage of the different evacuations."

"In such a case as this," says Dr. Latham, "I have seen a single dose of opium, dexterously administered, change the whole complexion of the disorder in a single night, and place the patient at once in a state of safety. Again, I have seen the sensorial affections incident to fever, which require opium for their cure, manifest themselves in another form. There has been high vascular action from the first, and large depletion has been required to subdue it, and guard particular organs, and especially the brain, from injury. Under such treatment all has gone on successfully, and the patient has reached the point of convalescence, when suddenly (the tongue, pulse, and all other circumstances continuing favorable) some strangeness of manner has arisen, and then the wildest delirium, and then the unrestrained passage of the evacuations. I have known a transition from such a state of convalescence, to such a state of peril, take place in a few hours; and I have known the patient again brought back to a state of convalescence in twenty-four hours, by a moderate dose of opium."

There are three conditions in fever which are benefitted by opium: first, when there is a constant watchfulness; secondly, when inflammation of the brain has been subdued by antiphlogistic measures, but delirium and other nervous symptoms remain; and thirdly, when an excited state of the brain exist without heat of the scalp, throbbing of the arteries of the head, or other inflammatory symptoms. I shall now adduce evidence in support of this statement. Dr. Latham remarks, after noticing affections of the brain in fever, that much light can be thrown upon them by a knowledge of the habits and state of health of individuals, previous to the access of fever. He says:—

"And here I would make one general remark, that by knowing what a man is, and how he lives habitually, the physician often arrives at a much better treatment of his disease. It is trying a man's disease by his health, and a most valuable test it is.

"In healthy and vigorous bodies, there is a certain balance and regularity of function which, even when disease befals them, is seldom lost, but their morbid action is still harmonious and proportional. In them diseases are often severe, but they are generally easy of cure. On the other hand, the weak and valetudinary, who, at the best, are full of jars and incongruities, are obnoxious to the strangest forms of disease, hard to understand, and hard to treat. Now fever, when it happens to a perfectly vigorous and healthy man, is never characterized by any such peculiar affections of the sensorium, as have been mentioned. These

are incident, according to my observations, to those only whose habits and mode of living have been calculated to do an abiding injury to the nervous system, and who have been long actually suffering from such an injury. Every class of society has furnished me with instances of this form of fever, and every instance has confirmed the truth of the remark.

"Among the higher and educated classes, there is in this age and country a wonderful striving for all the objects of wealth, and honour, and power. We need only think upon the strife of politics, the hazards of mercantile gambling, and the wear and tear of hard professional toil, to see how many there must be who, from the common business of life, have denied both to their minds and bodies new feelings and impulses, and new susceptibilities to disease. These susceptibilities chiefly belong to the brain and nervous system, and they are apt to come forth in frightful activity, when such men become the subject of fever. The trouble of the brain gets the mastery, as it were, of the disorder of every other part.

"The poor and mean among mankind have the mind overwrought, and the nervous system exhausted by real calamities just as the high and educated by their more refined; and thus they often claim an unenviable approximation to them in the character of their disease.

"To these moral causes," says Dr. Latham, "I will add one physical cause, which is of most extensive influence—the habitual indulgence in spirituous liquors. Individuals who have done a permanent harm to the nervous system by the abuse of spirits, do never, when they become the subject of fever, suffer delirium of the ordinary kind, in which the brain is excited nearly in the same proportion as the blood vessels, and which by remedies addressed to the blood vessels is uniformly controlled; but they suffer a dleirium in which the brain is actuated disproportionately to, and, perhaps, independently of, the blood vessels, and, if curable, to be cured by opium. This I venture to state almost absolutely, and without any exception."

My experience in those cases of fever under my own observation in Dublin, accords with the preceding eloquent and philosophical remarks. I have invariably observed, that in all cases where the patient had been exposed to the depressing effects which high intellectual or moral excitement, or the abuse of spirituous liquors produces on the nervous system, there will be, during the progress of fever, more or less cerebral disorder. In such cases, if delirium exists independently of vascular action, opium is the best remedy. A good deal of caution is required in regulating the quantity to be administered; and we should carefully feel our way by commencing with small doses, and when we find that these do good, we should increase them. It would not be safe in most cases to exhibit such large doses as we do in delirium tremens. We would begin with small doses, watch their effects, and repeat or discontinue the medicine, according to circumstances.—*Lond. Med. and Surg. Journal.*

(To be continued.)

REVIEWS.

Admonere voluimus, non mordere.——
Sunt bona; sunt quædam mediocria, sunt mala plura.

The Croonian Lectures, delivered at the Royal College of Physicians, in 1833, *on Cholera.* By GEORGE LEITH ROUPELL, M D. of London.

IF the untiring zeal—the patient and persevering research which have characterized, in an eminent degree, the investigations of the medical profession in relation to the nature of cholera, had been attended by a corresponding degree of success, we should have arrived, long since, at a perfect understanding of its mysterious character. But, unfortunately, shrouded in an apparently impenetrable obscurity, it has defied, as yet, the scrutiny of the most learned and talented of our profession. The most eminent physicians, with a self-devotion above all commendation, have thrown themselves, in vain, amidst the wretched victims of the disease, encountering every risk, and in innumerable instances, incurring almost the certainty of death themselves in order to study and unfold its nature.

Bursting upon us with the suddenness and violence of a tornado, it swept across our continent with almost unexampled rapidity—carrying death and consternation in its track. Having passed, however, it was fondly hoped by many that it would not again appear; but that, like some fierce monster, whom inordinate hunger has compelled to trespass far beyond his usual haunts, it would retire to its proper home—India, and no longer molest us. This expectation has, unfortunately, proved delusive, the disease has reappeared in many places, and recently among ourselves, selecting too its victims from among the temperate and most respectable classes. Compelled then to anticipate its reappearance among us, as often as there shall arise that concurrence of circumstances—whatever they are—which conspire to produce it, we are impelled by the most cogent considerations, to seek and disseminate all the information within our reach in relation to it.

Among those whose talents and opportunities afforded the means of accurate and extensive observation, Dr. Roupell must be numbered; having held the appointment of Physician in charge of the cholera patients at St. Bartholomew's Hospital—and of Physician to the floating Hospital for seamen, the Dreadnought, besides being a member of the city of London Board of Health. Actuated by a desire "to communicate to the profession any facts that may appear interesting or important," he selected cholera as the subject of the Croonian lectures which he had

been appointed to deliver at the Royal College of Physicians, and which he has subsequently published, "trusting," he says, "that what I have found serviceable in my practice, will prove equally so in the practice of others, and claiming only the merit of stating with impartiality and good faith, the result of my observation and experience."

After glancing at the origin of the most important epidemics—the plague, sweating sickness, measles, &c. &c. Dr. R. enters upon the consideration of the progress of cholera in England. The term *spasmodic*, he rejects, preferring that of *malignant*, because, "first, of its fatal tendency—next, because English cholera is spasmodic, and thirdly, because the more severe form of the disease is not attended by spasms." The objection is certainly valid, and might indeed have been extended to the appellation, "cholera," so far as it is used to convey an idea of the symptoms or nature of the malady. Precision is certainly desirable in affixing names to diseases; but it is now too late to substitute a new one for the disease in question, and the designation, almost universally applied, of "cholera," seems quite sufficient, without prefixing any epithet whatever.

The generally received opinion that the disease originated in 1817, at Jessore, Dr. R. does not concur in, but believes that a disorder described by Mr. Curtis in the Madrass reports, which prevailed in the year 1782, in the squadron of Sir Edward Hughes, then stationed in the East, and which arose from communication with an infected port of Ceylon, was identical with the disease now known as cholera. That the conclusion is correct there can be no doubt we think, after reading the passages quoted, describing the disease.

The different theories in relation to the cause and propagation of the disease are briefly adverted to, but the Doctor declines entering upon the discussion of its contagion, though he intimates in no very equivocal terms, his own conviction of the affirmative of the question. Many interesting statistical details are given, according to which it appears that the proportion of deaths in Great Britain has been about in the ratio of 1 to every 800 of its population. The rate at which the disease traveled in England was a little over 100 miles in three months,—a progress but slow compared with that in this country. That the disease may be expected to return, Dr. R. seems to entertain no doubt, as it has recurred repeatedly within the fifty years that it has been known in India: between the years 1817 and 1830 it has broken out no less than 650 times in different parts of India, and with very variable degrees of malignancy.

After alluding to the various, and often very contradictory, plans of treatment that have been adopted; whether addressed to the cutaneous structure, such as heat, acupuncture, moxa, &c.—to the respiratory organs, such as the inhalation of different vapors, and of oxygen, chlorine,

&c.—the abstraction or transfusion of blood, &c. and to the almost endless variety of internal remedies, the Doctor takes up the consideration of those means which he thinks experience has most extensively sanctioned, viz: bleeding, emetics, salines, stimulants, purgatives, and sedatives. To venesection he attaches more value than to any other remedy, in the more severe forms of the disease, when resorted to either during the premonitory diarrhœa, or even after it has more clearly developed itself, provided the system be not exhausted by copious discharges. The advantages derived from blood-letting do not depend, however, in Dr. R's opinion, upon the relief afforded to the congested venous system, as generally supposed, but to the check it furnishes to diarrhœa; and various cases are given to sustain this position; his observations on this point have led him to the following inferences:—"1st. That venesection will stop a diarrhœa, when calomel and opium, and an emetic have failed. 2d. That venesection will stop the purging in cholera, before collapse has taken place. 3d. That in collapse, bleeding is of doubtful benefit, if not positively hurtful." To emetics, no great degree of usefulness is allowed, though their occasional exhibition has been beneficial in his hands. Practitioners have been induced, he thinks, to give them undue importance, in consequence of observing sometimes after their administration, a rise in the pulse, and even the disappearance of the lividity of the skin, but this flattering change in the condition of the patient is usually but transient. Salines afford but little benefit generally, though he has witnessed good effects from their use in a few cases. The employment of stimulants, such as brandy, ether, &c. can only be resorted to with propriety, Dr. R. contends, in the early stage of the disease, when they will often arrest it, and should never be continued, as they often perniciously are, too long. With the view of simply removing the irritating contents of the intestinal canal, purgatives are of essential value,—but should chiefly be given in the commencement of the disease. As to narcotics, "although no remedies are of more consequence when properly directed, none have been more seriously abused," the proper period for their administration is at the commencement of the disease, and then in full doses. Calomel, which, in various doses, has been more extensively used, perhaps, than any other article, receives but little notice from Dr. R.—as a purgative, it has his approbation, but he dissents from those who "chiefly rely on it, in almost unlimited doses." Nor does he consider the constitutional action of mercury an antidote to the disease, even when its influence is produced before collapse occurs—though its appearance must be regarded as an evidence of a favorable condition of the system.

In his third lecture, Dr. Roupell considers the *nature* of cholera, and after alluding to the unsatisfactory efforts of others to elucidate it, with becoming diffidence, gives his own peculiar views. Considering the

theories of inflammation, and of congestion of the gastro-intestinal mucous membrane and of an alteration of the secretions, &c. &c. as insufficient to account for the phenomena presented, he expresses his own belief to be, "that the primary cause of the effects witnessed arises from an affection of the nervous system; that the immediate result of this is an irritability of the lymphatic portion of the vascular system, occasioning increased fluid discharges, which exhaust the system, and prove eventually fatal. The depression of the sanguiferous system is not the first step in the disease, for although the pulse is in general depressed, yet it by no means is invariably so, for cases are occasionally met in which copious and characteristic dejections are found while the pulse continues good." That the nervous system is first affected, Dr. R. thinks is proved by the cramps of the calves of the legs, arms, hands, &c. which so often occur in medical and other attendants when they first approach the sick. The fluids effused in cholera, Dr. R. affirms, are not simple serum, and differ essentially from that secretion which is produced by active irritation of minute vessels. "It contains a coagulating part; fibrine is suspended in it; its appearance is milky;—circumstances which distinguish it from simple serous effusion; but in each point in which it differs from serum, it approaches to the usual contents of the lymphatic vessels." Dr. R. denies that the copious discharges poured out by the bowels could be supplied by the blood vessels, as that would imply an excitement of the sanguiferous system, which, on the contrary, is usually paralyzed, in its superficial branches, though cholera proceeds in its course for hours after the suspension of the pulse.

"It is not probable that the profuse discharges poured out in cholera should be furnished from the vessels of a depressed system, to whose contents the discharges, in substance, bear no resemblance; but it is highly probable that these discharges should proceed from the action of the lymphatic system, which derives its energies from the depression of the sanguiferous system, more especially when the discharges are in their nature, as nearly as can be judged, identically the same as the ordinary contents of the lymphatic vessels."

The arguments which the Doctor adduces, to prove that nearly all the phenomena of the disease are explicable upon his views of its nature, our limits do not permit us to notice in detail, nor is it necessary, as their scope may be gathered from what has already been said.

The adaptation of the mode of treatment recommended, to the idea entertained of its nature, form the conclusion of the volume.

"In the premonitory stage, calomel, opium, brandy and other stimulants may be exhibited, when only the nervous extremities are affected, or determination be only slightly occasioned; this may blunt the impressions, and thus render the nerves insensible to the cholera stimulus, or by general excitement of the sanguiferous system the disease may be

arrested. Should, however, this determination continue, bleeding must be had recourse to; and this I conceive to act by emptying the vessels, and allowing the increased discharge from the lymphatics to circulate through the veins, instead of being poured out through the bowels; but bleeding will by no means succeed if late resorted to, when the blood is thickened, and has lost ingredients essential to its circulation, and to the vital processes; at that time any diminution in its quantity gives no relief, indeed seems to hasten the fatal result. In complete collapse, emetics and the cold effusion are infinitely the most powerful stimuli, and when the disease is once arrested, salines, I conceive, may be beneficial."

Whatever may be the value of Dr. Roupell's peculiar views of the nature of cholera, and of the mode of treatment advocated by him—and it is not our design to comment upon them—but one opinion, we think, can be entertained as to the propriety of disseminating every item of intelligence respecting it, which comes from a respectable source, even if it be a mere reiteration of a fact already known, as the medical profession are far from having arrived at any settled opinion, as to either its nature or treatment, and it becomes a matter, therefore, of no small importance to possess the accumulated experience of all who have had extensive opportunities of observation.

The ardour with which the subject was investigated at first, has certainly greatly abated, nor is it surprising, when we recollect how much time and talent have been directed to it, with so little reward—for human ingenuity has been tortured to the utmost, and volumes almost without number written, to unravel the mysteries of this dreadful scourge, which, like another Sphinx, has as yet eluded explanation. The anticipation, however, of its frequent reappearance, should operate as an incentive to renewed efforts. Let us hope that an Œdipus may yet appear to solve the enigma, and free us from doubt and apprehension. J. P. C.

The American Cyclopedia of Practical Medicine and Surgery; a digest of Medical Literature. Edited by Isaac Hays, M.D. Surgeon to Wills' Hospital, &c. &c. Part VI. pp. 120. Carey, Lea & Blanchard, Philadelphia, January, 1835.

We recur with sincere gratification to the examination of this truly valuable work, and our only regret is, that we are not able to do so oftener, on account of the intervals which necessarily intervene between the appearance of the several numbers. This delay, however, which we know is unavoidable, detracts nothing from the value of the work, but on the contrary enhances it, by allowing the several contributors

more time to elaborate and digest their articles, than they could have, were they hurried through the press. There is perhaps no species of composition requiring more labour and research, than that which is destined for a cyclopedia, since it is not sufficient that the writer should merely furnish a hasty sketch of his own views and opinions, but it is his duty to make a faithful digest of the opinions of others, and thus present a summary of the amount of information that may exist upon the several topics of which he has to treat. This exacts both time and industry, and we think we may safely appeal to the several numbers of the American Cyclopedia of Practical Medicine, for evidence that these requisites have not been employed in vain. The present number fully sustains the high character established by its predecessors, and we think several of the articles will compare favorably with any others to be found in similar works, on the same topics.

The first article of considerable length, is by Dr. Reynell Coates. It furnishes an ample and satisfactory exposition of the surgical anatomy and diseases of the *ankle*, and contains much valuable practical information. The article *anthrax*, by the same author, furnishes a very good view of the pathology, and of the different modes of practice, pursued in that disease.

The article *antimony*, by Dr. Franklin Bache, is elaborate, and occupies about thirty-five pages. It treats of the chemical and pharmaceutical history of that mineral; its effects on the system and therapeutical application, and its toxicological effects and tests. It is a valuable article, and contains the most recent information on the subject.

The article *anus*, anatomy, physiology, and pathology is the longest in the present number, and will besides occupy a portion of the next. It is by Dr. Reynell Coates, and is highly creditable to the industry and talents of the author. We think, however, its great length is somewhat objectionable, and that its practical value would have suffered nothing, by the omission of some details unnecessarily minute, upon affections of trivial importance. The anatomical and physiological details too, although highly interesting and valuable, as means of illustrating the pathology of the part, are misplaced, as they belong more properly to the article rectum, from which they cannot with propriety be separated.

The sacculi of the anus, situated immediately above the sphincter, which have been alluded to by several anatomists, and noticed by Ribes, are more accurately described in the present article, than they have been before. As this arrangement is important, in relation to fistulæ of the anus, and some other morbid affections, we shall subjoin the author's remarks on this point of anatomy.

"The venerable Emeritus Professor of Anatomy, in the University of Pennsylvania, had been in the habit of noticing in his former annual course of surgical lectures, a peculiar condition of the anus, in which there exist certain

well-defined pouches or sacs within the canal, which, by occasionally arresting small portions of fæces, or minute foreign bodies, give rise to great inconvenience, and demand the performance of a peculiar operation for the relief of the patient. Dr. Horner, in prosecuting some examinations, post-mortem, with the view of elucidating this subject, was surprised to find a series of semilunar valvules, within the canal, such as have been hinted at, by certain anatomists, as an occasional occurrence, but the existence of which has been repeatedly denied by others. His attention being once fairly called to this structure, Dr. Horner discovered these valvules in every body which he examined for the purpose, and therefore draws the legitimate conclusion that they are normal and constant. The following description is drawn from the appearances presented by four different preparations, taken promiscuously from a considerable number which the Professor did us the favour to submit to examination."

Immediately below the margin of the internal sphincter we find a series of membranous pockets or sacculi, corresponding in number with the grooves between the columns of the rectum, one of which grooves is directed towards, and terminates in, each of the culs-de-sac. On the outer side, the sacculi are lined by the mucous membrane of the grooves, prolonged into the intervals of the hemispherical eminences already noticed, but which are not sufficiently distinct, after death, to be well represented in a drawing from nature. Internally, or on the side next the canal, the sacculi are completed by portions of loose membrane, which are processes from the reverted integuments lining the canal below. Each of these loose portions is attached at either end to the base of one of the columns of the rectum, and its free margin hangs in a curve between these points, thus forming a purse with the mouth presenting upwards, and resembling, in some degree, one of those formed between the valves of the aorta and the parietes of that vessel. Unlike the sacculi said to be sometimes formed by the intersection of the transverse and longitudinal folds of the rectum near the upper part of the anal canal, these pockets may be compressed, but cannot be obliterated by the distension of the anus. Their number, form, and position must necessarily vary, with those of the columns and swellings, which give them attachment; and, like the columns, some of them are frequently rudimentary. The upper margins of these pockets, taken collectively, appear to form the festoon mentioned by Cruveilhier as the termination of the cuticle."

We have noticed these articles, because they are of greater length than any others in the present nnmber. There are a number of short articles on a diversity of topics, which contain much useful information. The writers are Professor Jackson, and Drs. Griffith, Wood, Bache, and the Editor. We cannot designate the subjects particularly, but shall be obliged to refer to the work itself.

We have so often expressed a favorable opinion of this important enterprise, that it can scarcely be necessary for us to repeat it on the present occasion. Already has it elicited the commendations of some of our transatlantic brethren, and we think the medical public owes it to the editor and the publishers, to come forward in mass, and patronize a work—which promises to be so useful, and to reflect so much honor on the medical profession of our country.

COLLECTANEA.

Apis vero ratio media est; quæ materiam ex floribus agri et horti elicit, sed tamen eam propria facultate vertit et digerit.—Nov. Org.

1. *Researches on the Connection of the Sympathetic Nerves with the Spinal Nerves, by* Dr. C. W. Wulzer, Professor, and Director of the Surgical Clinicum at Bonn.—When Scarpa, in the year 1831, by the important observations concerning the separation of the nerves of sensation from those of motion at that time promulgated, was prevailed on to retract his opinion, publicly expressed so far back as the year 1779, according to which the branches of communication between the spinal and sympathetic nerves are connected with both roots of the former;* I was moved to submit in 1832, and again in 1834, to a reiterated revision, my investigations on the same subject, which were made known in the year 1817. My respected friend, Professor Mueller,† and also Professor Retzius,‡ of Stockholm, undertook the subject at the same time. The former from investigations in calves, the latter in horses, obtained results, which perfectly agree with those yielded by my researches in man. Moreover, in the year 1833, my respected colleague, Professor Mayer, by investigations in man, and in a calf, not only proved the connection of the sympathetic with both roots of the spinal nerves, but has even followed some fibrils of the sympathetic into the spinal marrow, of which he has furnished very instructive delineations.§ In the mean time the subject is so important in a physiological respect, as to make the greatest possible certainty highly desirable, the obtaining of which is the object of my submitting the following contribution:

The anterior slender root of the spinal nerves runs on the anterior side of the thick posterior root, entirely separated from the latter by the ligamentum denticulatum, to the outer or anterior end of the ganglion of the posterior root, to connect itself intimately with the latter immediately before its ganglion.‖ This occurs in such a manner that a number of their fibrils, especially the innermost, cross above and beside one another, and soon become so confounded together, that in their further course it is no longer possible to distinguish which fibrils belong to one, and which to the other root. But on the outer surface of both roots, a number of fasciculi remain, which preserve an

* Antonia Scarpa de Gangliis Nervorum, deque origine et essentia nervi intercostalis, epistola ad H. Weberum, anatomicum Lipsiensem. Mediolani, 1831-2. Annali Universali di Medicina, vol. 58, Milano, 1831. Professor Weber, of Leipsick, has supplied a copy of this treatise, which has appeared as a program to the inaugural dissertations of G. E. H. Mueller, and C. H. E. Herzog, 1831.

† Meckel's Archiv. für Anatomie and Physiol. b. vi., 1832, s. 85.

‡ Meckel's Archiv. b. vi., s. 260.

§ Nov. Act. Acad. Nat. Cur. vol. xvi., p. ii., p. 679, tab. lvi., fig. ii.; et tab. lvii., fig. i.

‖ Scarpa's assertion, that the two roots effect their union far below the point of the ganglion, (longe infra eam sedem duas illas radices nexum simul inire,) is so remote from the truth as to be scarcely explicable.

independent course, and do not mix with one another. It is several lines anterior to the point of junction of the two roots, that the nerve which turns towards the sympathetic usually takes its origin; only with some exceptions, it is nearer. The fasciculi of both roots are already so mixed with one another in this place, that for a great part of the fibrils which compose the branch of communication, it is entirely impossible to determine, whether they belong more to the anterior or posterior root. In another part, however, this may be discerned without much trouble. The fasciculi, namely, above mentioned, which run upon the outer surface of both roots, take a part in forming the nerve of communication with the sympathetic nerve; and here it is clearly manifest, that the important communication between the two systems of nerves is accomplished throughout, as well by the anterior as the posterior roots.

It will not be difficult for a person who is accustomed to labors of this nature, to exhibit this disposition of the nervous twigs with the naked eye; one less practised may make the experiment, working with a lens of about four inches focal distance.

When I compare what I published upon this in the year 1817,* with what is here said, I perceive it to be for the most part a repetition; I have found no cause to alter my view in any essential point. The venerable Scarpa, probably, permitted himself to be carried away through his early acknowledgments for the discovery of the separation of the nerves of sensation and of motion, so far as to overturn his own true decision of 1779. When Scarpa, in his last writing, attributes want of carefulness to the work of Adam Schmidt on this subject,† who asserts, that the communicating branch in question arises from the anterior roots of the spinal nerves alone, it must be confessed, that a superficial view tells much in favor of Schmidt's opinion, and so much, at least, is certain, that the communicating branch leaves the system of spinal nerves out of the anterior root, as it requires a more penetrating investigation to be convinced, that the posterior root sends substance to it likewise. If we look at the beautiful drawing furnished by Scarpa,‡ we might believe that it was made merely to support the correctness of Schmidt's opinion. Mayer represents twelve fibrils of the sympathetic nerve, which sink into the anterior root of the second lumbar nerve, and exhibits only two, as producing the conjunction of the posterior root and the ganglion.

If the kind of communication here sketched, be now considered in a physiological aspect, it must be seen, why, for the better explanation of the function of the sympathetic nerve, its communication with the posterior root of the spinal nerves alone should be particularly desirable. We find almost every where the nerves of sensation and motion in such immediate neighborhood, in most places even so intimately united, that no doubt can prevail concerning the reciprocal necessity of the near vicinity of both. The indispensable consent of all the parts of the nervous system imperiously demands the intimate connection of those amongst themselves; why should the sympathetic nerve be an exception from this, whose name justly intimates that this, at least, must

* De Gangliorum Fabrica atque Usu, §. lxxx. p. 95.

† A. Schmidt, de Nervis Bunbalibus, Vindob. 1794, §. xii. p. 19.

‡ Anatomicarum Annotationum. tab. I. Mutinæ. 1799, tab. ii. fig. 1.

be expected in it? Besides, the sympathetic nerve is also destined for the production of motion; the pulsation of the heart, and the peristaltic motion of the intestines last longer than all the other motions of the body. I am of opinion, that for the performance of its functions of this nature, the connexion with the anterior roots of the spinal system of nerves is very essential, for Scarpa's opinion, that the muscular fibrils of the heart, and of the intestines, receive the stimulus to their action not from the nerves, but from contact with the blood, and from the ingesta, seems to me entirely inadmissible. Does not also the important function of secretion which the vegetative nerve presides over, maintain uninterruptedly a peculiar species of motion in all the secretory organs.

The circumstance that the sympathetic nerve is not obedient to our will, would likewise be, in my opinion, not better explained, if this communicated only with the posterior root of the spinal system of nerves. If it be one of the functions of the ganglia, that in them the further passage (*leitung*) of the will's influence should be interrupted, (as I am firmly convinced it is;) for this, the spinal ganglion is not necessary, indeed, to the sympathetic nerve, as this, in itself, possesses for this end ganglia enough, which are disposed in such a series upon its principal chord, (the so called stem,) that the connecting arches coming from the spinal nerves, must pass over immediately into those terminal ganglia. The presence of these latter appears to me, accordingly, to be perfectly sufficient, to explain the degree of independence which exists between the sympathetic nerve and the sensorium commune.

A phenomenon much more difficult of explanation is presented in the fact, that the motor and sensitive nerves having arisen separately from the spinal marrow, soon after their origin are placed in immediate apposition, and by a continued decussation of their finest fibrils enter into most intimate connexion; yet, notwithstanding this, by cutting across the posterior or the anterior roots of the spinal nerves, sensation or motion can be abolished at will. The correctness of this fact has been decidedly ascertained; the experiments which Professor Mueller had the goodness to repeat in my presence, upon frogs, leave no doubt upon my mind with regard to it. Also, since I can, by my own experiments, confirm the observations of Fontana, Prevost, Dumas, Ehrenberg, and J. Mueller, that no where a perfect anastomosis of the substance of the nervous fibrils can be ascertained, but only its immediate apposition can be demonstrated: the question still remains, how, whilst the most intimate contact of the parts of both systems of nerves is preserved, can the separate operation of each be explained? The pleasing comparison of nervous agency with the operations of electricity, which as long as each separate cord of the spinal system of nerves might be reckoned as simultaneously the conductor of sensation and motion, had much in its favor, from this receives a severe blow; for what physician (natural philosopher, *physiker*,) would have it in his power to explain the separate agency of two conductors which stand in the most intimate connexion with one another by means of conducting wires? I am of opinion, that the cellular tissue which lies between the separate cords effects this remarkable isolation of agencies, in somewhat of the same manner, as by means of cellular substance, the separate layers of the intestinal parietes are so separated from one another, that they mutually do not disturb

one another in their functions, but that even pathological processes pass with difficulty from one to another. At all events a wide field remains for further investigation with respect to this subject.—*Dublin Journal, Jan.* 1835.

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2. *Observations on the Existence of a proper Fibrous Tunic of the Lung, communicated by* Dr. Stokes.—It has been long taught, that while the pericardium could be demonstrated to be a fibro-serous membrane, at least in that portion not reflected over the heart, the pleura was a serous membrane, between which and the pulmonary tissue nothing intervened, except the sub-serous cellular tissue.

That this opinion is grounded on an imperfect examination of the parts, I have for several years satisfied myself; and I have repeatedly demonstrated the existence of a strong capsule between the serous membrane and the lung, and which completely envelopes this latter organ. In the healthy state, this capsule, though possessing great strength, is *transparent*, a circumstance in which it differs from the fibrous capsule of the pericardium, and which has probably led to the fact of its being heretofore overlooked.

The first instance in which I discovered this membrane, was in dissecting the lung of a patient who had died of a chronic pneumonia. On dividing the organ with a sharp knife, through the pleura, I observed three distinct layers. One the pleura; another apparently the sub-serous cellular tissue, much thickened and hardened; and a third of great density, and nearly opaque. This was the tunic in question. Since then I have several times observed it in the diseased, and also have succeeded in demonstrating it in the healthy lung. But it is always more perceptible in the case of disease, when the tissues are more or less hypertrophied and rendered opaque.

In the healthy lung, however, it is not difficult to exhibit it. The mode which I adopt is the following. A portion of the lung being made to a certain degree tense, by grasping the subjacent parts, so as to inflate the more superficial layer of cells, I make with a sharp scalpel the lightest possible scarification of the figure of an U. This divides the serous membrane, but leaves the fibrous untouched. The lower edge of the serous membrane is then to be seized with a delicate forceps, and by gentle traction, and an occasional division of the sub-serous cellular tissue, a flap of the pleura can be turned up, leaving the air cells still protected by the strong though transparent fibrous coat. The surface of this latter investment, even after the removal of the serous membrane, is still smooth and shining. The knife is now to be carried through the fibrous coat, and it is to be turned back in the same mode. Its great strength is at once apparent, on its being grasped with the forceps, or raised upon the point of the knife, and the surface of the lung then displayed is irregular and fleshy.

This tunic invests the whole of both lungs, covers a portion of the great vessels, and the pericardium seems to be but its continuation, endowed in that particular situation with a still greater degree of strength, for purposes sufficiently obvious. It covers the diaphragm, where it is more opaque, and in connection with the pleura lines the ribs, and turning, forms the mediastina, which thus are shown to consist of four layers, two serous and two fibrous.

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an additional analogy between the lung and the parenchymatous and the glandular organs of the abdomen, which have their fibrous capsules, and illustrates the general law, of the constant association of serous and fibrous membrane, as we see to occur with respect to the arachnoid, pericardium, peritoneum, tunica vaginalis testis, and the synovial capsules. Considered pathologically, it may explain the pain of pleurodynia and pleuritis, and the rarity of perforations of the pleura, so remarkable when considered in connection with the frequency of ulcerations of the lung, which constantly approach so close to the surface as to be bounded by the fibro-serous membrane alone. In pleuritis with effusion, its existence may assist in explaining the binding down of the lung and its corrugated appearance after the removal of the effusion, and as has been suggested to me, it may be the seat of ossifications of the pleura.

Since the above was written, I have been informed that Dr. Hart has demonstrated this tunic, in his anatomical lectures in the Park-street School, and in conversation with that gentleman, I have found that he has held the same opinions as those expressed above, for some years; and it is interesting, that he was first led to the observations of the existence of this tunic, by circumstances similar to those which I have described, namely, the dissection of the lung, which had been affected by chronic pneumonia. He describes it as most strong beneath the costal pleura. It is highly gratifying to me to find that my opinions are corroborated by those of this eminent and philosophical anatomist.—*ib.*

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3. *Case of Rupture of the Tendon of the Biceps Flexor Cubiti.* By Sir George Ballingall.—Mr. D. a healthy active man, about 50 years of age, well known to many members of this society as an eminent chemist and druggist, while raising a heavy weight, with the tips of the fingers of his right hand, suddenly felt a snap, accompanied with a numb pain, in the lower part of the arm, a little above the elbow. The weight instantly dropped from his hand, and he was conscious of an inability to use his arm as formerly. On endeavoring to take off his coat, within a few seconds after the accident, he had great difficulty in doing so, owing to the swelling which had already taken place in the arm. On examination, there was observed a large tumour about the middle of the arm, occupying the seat of the belly of the *biceps* muscle. This being considered by Mr. D. as arising from effusion, he had a pretty tight bandage applied. He now felt scarcely any pain, and comparatively little inconvenience in the use of his arm.

Next morning, on removing the bandage and examining the arm carefully, Mr. D's son, a medical man, was of opinion, that the tumour, which had now increased much, arose entirely from the retraction and swelling of the *biceps* itself. In this opinion he was confirmed by finding, that, in the hollow which existed below the tumour, there could be detected a body, apparently the tendon of the *biceps*, which was loose at one extremity, and could be moved from one side to the other with great facility. Bandages were now applied, consisting of two pieces of leather accurately and tightly laced, one on the arm and the other on the fore-arm, with a strap passing from the lower to the upper piece of leather, for the purpose of keeping the arm in the bent position. Owing to the patient using his arm much, the bandages were not kept accurately applied, and after ten or fourteen days they were thrown aside.

The tendon has gradually contracted adhesions to the neighbouring parts; and although there is still considerable swelling of the muscle, and some difference between the form of the two arms, yet the patient can use the arm tolerably well. It is not by any means so strong as formerly, and he cannot make any great exertion with it. He experiences difficulty, and some degree of pain or cramp in attempting to raise a weight with the points of his fingers, and finds the power of pronation considerably impaired in the affected arm.—*Edinburgh Medical and Surgical Journal, January*, 1835.

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4. *Tracheotomy.*—The following very extraordinary case, was reported at a recent meeting of the Acadamie Royale de Medécine. A young woman, aged 22, who had been cured of extensive syphilitic ulcers of the throat by the ordinary means, experienced a total loss of voice, and so much difficulty of breathing, that the operation of laryngotomy was resorted to as the only means of affording relief. The division of the crico-thyroid ligament, however, did not give passage to the air, this portion of the larynx being doubtless obliterated by adhesions and false membranes, and it was found necessary to extend the incision downwards, so as to divide several of the cartilaginous rings of the trachea. As soon as this was accomplished, the air passed freely, and respiration was established through the opening. A canula was introduced with the intention of leaving it in the aperture; but as its frequent closure by mucus gave rise to repeated attacks of suffocation, M. Regnoli resolved to excise several rings of the trachea, in order to establish an aperture of sufficient extent, to allow of the uninterrupted passage of the air, and the free exit of the mucous and purulent secretions. Several fruitless attempts were made to re-establish the natural opening of the larynx, by means of probes passed from the artificial opening upwards. The individual had, nevertheless, survived four years at the period of this report, breathing freely through the artificial passage, which she kept open herself by means of a canula. When she closed the tube, she could make herself understood, a small portion of air finding its way into the mouth, through the larynx, which was probably not completely obliterated.—*Revue Medicale, Oct.* 1834.

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5. *Purulent Matter found in the centre of a Fibrinous Concretion.*—M. Bricheteau presented a heart affected with aneurism, in the right auricle of which there was a fibrinous tumour as large as an ordinary nut, containing in its centre, consistent purulent matter. The fibrine was disposed in concentric laminæ, similar to the arrangement that is observed in aneurisms of long standing.—*Ib.*

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6. *Singular cure of an Anasarca!!!*—The patient was attacked with anasarca and dropsy after typhus fever. His body was completely infiltrated, and he was reduced to a perfect state of inaction. He had tried in vain various remedies, when some one advised him to apply to the abdomen a certain number of the domestic toads, and to second their action with frequent friction.

During three days the patient had recourse to this disgusting application. Thirty-six toads were put on, and renewed every now and then, and the extremities were submitted to powerful friction. On the second day abundant

stools were the result of this new remedy. There was alternation, with a copious discharge of urine. The toads were continued with a similar effect, and in a few days the man was cured of both affections.—*Lancet, Dec.* 1834.

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7. *Pulsations in the Abdomen.* By Dr. Stokes.—As a sign of diseased action, throbbing of the abdominal aorta has been long recognized. But its nature in all cases does not seem to have been discovered. It has been described as a nervous phenomenon; as the result of the pressure of tumours on the vessel, and as a symptom of aortitis. It may also be seen in cases of great retraction of the abdomen. But there is a pulsation of the adominal aorta or its immediate vessels, which is symptomatic of inflammatory disease in the digestive system, and which a long experience enables me to say may be considered an important assistance in diagnosis. A throbbing generally commensurate with the disease; removed by treatment calculated to relieve enteric inflammation, and aggravated by every thing which will increase this affection. In other words, we may have from enteritis or peritonitis a throbbing of the abdominal aorta or its vessels, perfectly analogous to the morbid action of the radial artery in whitlow, or of the carotids or temporal arteries in cerebritis.

The cases in which I have most frequently observed this symptom, are those of the gastro-enteric fever of this country; and when we reflect on the latency of the follicular ulcerations of the intestine, and the great number of times that this lesion is overlooked, and exasperated by improper treatment, we must see of what importance the knowledge of any *prominent* symptom must be. I do not say that it occurs in all cases, such is far from the fact; but I know that it occurs in many, and may be made a great assistance in diagnosis.

I have also found it in cases of fever after corrosive poisoning, where the pulse was almost absent at the wrist; and in peritonitis, where no pulse could be felt.

In these cases we have frequently the following group of circumstances: fever, prostration, thirst, tenderness of the epigastrium or the ileo-cœcal region. The pulse at the wrist is often small and feeble, while the abdominal pulsations are comparatively violent. In most cases the other symptoms of gastro intestinal disease are sufficiently plain. But in several instances this want of proportion between the action of the radial, and abdominal arteries, *combined with fever*, has been the principal indication of enteric disease.

As might be expected, the increased action may extend to the femoral arteries. This fact enabled me on one occasion to arrive at an accurate diagnosis. A patient who had been subject to chronic disease of the stomach, was brought into hospital in a dying state. Something, he said, suddenly gave way within him a short time before his admission. His countenance was collapsed; the hands blue, and no pulse could be felt at the wrist. The belly was swelled, but not very tender.

It was suggested that the case might be a rupture of an abdominal aneurism; others supported the opinion that it was an example of peritonitis by perforation: and that the latter diagnosis was the right one, I concluded from the fact, that while no pulse could be felt at the wrist, the femoral arteries at the groin were pulsating strongly. Recollecting also that the patient had

laboured under symptoms of chronic gastritis, and that the feeling of giving way was felt first in the left hypochondrium, I concluded that the case was one of peritonitis from a perforating ulcer of the stomach. On dissection, an old circumscribed ulcer of more than an inch in diameter, was found in the great curviture of the stomach. This had perforated the peritoneal coat by an irregular rent. The aorta was healthy.

In some cases we have found that the pulsation was strongest in the direction of the right iliac artery, and subsided with the symptoms of the gastro-enteric fever. We have seen it with and without the occurrence of diarrhœa, and frequently reappearing with relapse, particularly after errors in diet, or hypercatharsis. In some instances it has subsided when the diarrhœa appeared, and returned on its being arrested by an astringent.

The knowledge of this sympathetic pulsation of the great vessels of the abdomen may throw light on the supposed cures of internal aneurism, by the system of Valsalva. It must be recollected that the cause of this pulsation (which is often violent) is most frequently a local inflammation of some part of the digestive system; in other words, an affection likely to be relieved by such a mode of proceeding. Indeed the suggestion of Bertin, that some of these cases were not really examples of aneurism, seems at least so far, highly probable.—*Dublin Journal, July*, 1834.

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8. *Extirpation of the Parotid Gland.* By Dr. M. Eulenberg, of Wriezen on the Oder.—The subject of this case was a female, aged 29, who was affected with a scirrhus of the left parotid gland. When the whole circumference of the tumour had been detached, it was found that a small process, about the size of a hazelnut, extended so profoundly between the deep seated parts, that it could not conveniently be dissected, until the principal part of the tumour was detached. This was accordingly done in order to make room, when a hook was fixed in the small lobe in question, and it was in like manner removed without much difficulty. The operation was performed on the 7th of April, and on the 11th of May, the wound had completely healed, merely leaving the paralysis of the face, which was the necessary consequence of the division of the facial nerve.–*Rust's Mag. für die gesammte Heilkunde*, 1834.

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9. *Extensive Ossification of the Spleen.* By Dr. Julius Schmidt.—The subject of this case was an old drunkard, who died suddenly. The coats of the stomach were found very much thickened, and in attempting to detach numerous adhesions which the spleen had formed with the surrounding parts, its substance, which was preternaturally soft, was broken up by the hand. In the midst of it was found a bony mass, amounting to half the size of the organ.—*Hufeland und Osann Journal für Practisch. Hielkunde, Jan.* 1834.

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10. *Re-union after complete separation.*—The *Osservatore Medico* contains a curious, and what it affirms to be a well authenticated, case of re-union of the nose, after complete separation.

The patient, a woman of the town, had the whole of the soft part of the nose bitten off, in a quarrel, by a man. She was immediately carried before the commissary of police, when the nose was dressed. Three hours afterwards, Dr. Carlizze, who happened to come in, saw the patient, and entreated

that search might be made for the lost nose. This was done, and two and a half hours afterwards the mutilated portion was found, contracted, and all covered with filth. The doctor, however, washed the parts clean, and applied the piece, putting in a few points of suture. The dressings were not removed before the seventh day, when the witnesses observed, with great satisfaction, that complete union had taken place. In thirty-seven days the cicatrix was perfectly consolidated. The aspect of the nose, however, was most disagreeable, from the color of its tip, which presented a livid, unhealthy appearance. A solution of nitrate of silver (moderately strong) was applied to this part, and after the fall of the eschar, in five days, the nose resumed its natural colour. [*Lancet, Dec.* 1834.

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11. *Method of injecting the Liver, employed by* Mr. KIERNAN.—I for some time experienced great difficulty in making successful injections of the minute vessels of the liver; and this difficulty, arising from the presence of blood in the vessels, was increased when my object was to inject the two veins in the same organ, no exit being then left for the blood. Very little advantage is gained by previously injecting warm water, a large portion of which remaining in the vessels dilutes the injection and obstructs its course. The object is to obtain a free passage for the injection through the minute vessels; this can be accomplished only by tying the portal vein and hepatic artery in the living animal, and thus depriving the liver of all its blood. In one minute after the application of the ligature, the liver becomes bloodless, and the sufferings of the animal may be abridged, and regurgitation into the hepatic veins prevented, by dividing the inferior cava near its termination in the right auricle. Before injecting, the body of the animal should be left in water during twenty-four hours, a ligature having been previously placed on the inferior cava, above the diaphragm, to prevent the entrance of the water into the hepatic veins. If the liver be previously prepared in this manner, all the intralobular hepatic veins may be injected with one colour, and all the interlobular portal veins with another, and the course and distribution of each set of vessels may be studied with facility. The various appearances produced by congestion of the liver may be imitated by injection. This method of injecting is equally applicable to every other organ. I made a very successful injection of the portal and hepatic veins in the exsanguine liver of a man who died from the rupture of an aneurism of the abdominal aorta, under the care of Dr. Hope, in the Marylebone Infirmary. In the preparations of this liver, as in those made by injecting the vessels after the ligature of the portal vein and hepatic artery in living animals, the central portions of the lobules are coloured with blue, and the marginal portions with red injection.—*Lond. Med. Gaz., Jan.* 1835.

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12. *Curious effects of Morphia.*—Dr. BELLINGERI quotes a case of violent and obstinate hiccup, wherein acetate of morphia was used by sprinkling on a blister raised over the epigastrium. It produced a sensation of compression of the back part of the head: the patient could neither move nor speak: he had lost all sensation: both epididymes tumefied. In the course of an hour these symptoms disappeared, and were replaced by a general and intolerable itching, particularly of the forehead, nose, chin, and scrotum; at length, after two hours, the itching ceased, and the hiccup was found to be cured.—*London Medical and Surgical Journal, Dec.* 1834.

13. *Case of protracted abstinence from Food.*—A woman named Engeltje Van Der Vlies, resident at Pünacker, who professed to have continued for years without food, was in 1826, subjected to the scrutiny of a committee appointed by the Provincial Commission of Physicians established at the Hague. The attempt to induce her to consent to this scrutiny had been frequently made, but she had always refused it, alleging "that it was disagreeable to be watched, that she had no immediate interest in making the world believe it," &c. &c. Piqued by the expression of their disbelief in her power, she at length consented to be watched for a certain time in any manner the commissioner might think proper to order. The mode determined upon was, that four women should remain in the house for four weeks, and should watch, two and two, night and day; the burgomaster of the town, as also the usual medical attendant of Engeltje, were to visit her at all and unexpected times.

The investigation of the watchers commenced on the 11th of November. On that day, during the first watch, she did not sleep; in the second watch, for half an hour only.

12th. Inclined to convulsion; spat considerably; complained of cramp and pain in the side; in night was very restless, and had two convulsive fits; prostration great.

13th. In good spirits: some cramp of stomach; slept soundly in the night.

14th. Had a fit; rinsed her mouth with water; slept in fore part of the night; had two fits early in the morning; flow of saliva constant and great.

15th. Nothing particular.

16th. Severe headache and pain in the throat; rinsed mouth twice.

17th. Attacked with spasms of chest and throat; aphonia; felt uneasy, but soon became better; slept soundly at intervals; rinsed her mouth; worked with her needle.

18th and 19th. Put her feet in warm water; after 5, P. M. was feverish, and had a convulsion; after 9 o'clock dosed at intervals; rinsed mouth once.

20th. Rinsed mouth twice; slept none in the night; otherwise well.

21st. Severe headache in the morning; mouth rinsed twice; slept well in the night; worked during the day.

22nd. Nothing particular; no rinsing.

23rd. Some headache; rinsed mouth once; slept occasionally in the night.

24th. Low spirits; rinsed mouth once; slept soundly in the night.

25th. Pain of chest and abdomen in the forenoon; feet in water; rinsed mouth once; spasms of chest in afternoon; slept tolerably well part of the night, and awoke with headache.

26th. Palpitations of heart in afternoon; worked; pain of side; slept tolerably well.

27th. Low spirits; feet in hot water; no sleep at night.

28th. Nothing particular; tolerable sleep.

29th. Headache; very little sleep.

30th. Rinsed mouth once; slept soundly.

Dec. 1st. Slept a little; rinsed mouth once; constantly at work.

2nd. Rinsed mouth twice; little sleep.

3rd. Headache; feet in water; feverish in afternoon; slept soundly at night.

4th. Pain of chest and throat; nervous from occurrence of a storm; feet in warm water; rinsed mouth once; slept two hours.

5th. Rinsed mouth once; slept little; pains gone.
6th. Headache; rinsed mouth; slept none.
7th. Some pain of side and chest; otherwise well; sleep very little.
8th. Rinsed mouth once; slept a little.
9th. Was well.

During the whole of the above period, Engeltje took no food of any kind whatever. Her occupations consisted in knitting, sewing, cleaning vegetables, and reading. Her mouth was usually rinsed with water, with tea, and twice with buttermilk, the quantities of which were measured before and after rinsing. She made no water, and passed no fæces during the whole month; no air was passed her alvum, but she eructated very much. She got up at nine, A. M., and went to bed at ten or eleven o'clock, P. M.

The commission having taken the deposition on oath of the watchers, concurred in acknowledging that the above was one of those rare cases of organization, wherein a protracted abstinence from food is compatible with the exercise of the functions. Instances of the same kind are related by Haller in his *Elementa Physiologiæ*, vol. vi. p. 171, et seq.; Dictionnaire des Sciences Medicales, Art. *Abstinence;* and Voltelen *Diatribe Medica memorabilem septennis apositæ historiam exhibens*. Lugd. Batav. 1771.

The following is a condensed account of the circumstances, &c. of the subject of the above case.

Engeltje is thirty-nine years old. In her fifth and sixth years she suffered from worms and frequent convulsive fits; she, however, got rid of the worms, but remained in a debilitated condition for several years; in fact, up to her eighteenth year. At this time Napoleon's conscription carried off her brother, which so affected her, that from that time she again became a prey to frequent convulsive fits. At subsequent periods she was treated for hysterical affections and chronic inflammation of the intestines: her appetite was very small. It remained so until May, 1818, when she began to lose the use of her feet, refuse nourishment, and take nothing but drinks, and chiefly of buttermilk: medicines were always rejected immediately after being swallowed. In 1820, the respiration became abstracted. In March, 1822, up to which time the hysteria had been excessive, an enema was administered, which brought away some fæcal matter, after which time no fæces or urine were ever passed, with one exception. She also gradually forbore all fluids, except to rinse her mouth from time to time. In 1824 and 1825, she had repeated attacks of intestinal inflammation. In October of the latter year she passed, with dreadful pain and violent spasmodic respiration, a small quantity of urine and a little stool. And in 1826, again, a little urine, which was tinged with blood. Since the 10th of March, 1822, she has therefore had only one motion, and only twice passed a remarkably small quantity of urine. Her spirits were always inclined to flag, and particularly latterly, when doubts were cast upon the truth of her history. She is of low parents, and has always, until very lately, been a servant in various families.

This account of Engeltje is given by A. Grootenboer, a surgeon who has frequently attended her in her various attacks of sickness. It, as well as the report of the Commission to investigate the case, is dated Dec. 11th, 1826.

Lond. Med. and Surg. Jour. Dec. 1834.

14. *Hydrated Tritoxyde of Iron, an Antidote to Arsenic.*—Hitherto there has not been found any antidote against poisoning by arsenic; that is, there has not been found any substance capable of decomposing the oxydes or arsenical salts, without giving rise to a new compound poisonous itself. Dr. Bunsen, of Göttingen, has just discovered that the hydrated tritoxyde of iron is an antidote to arsenic, and expresses himself respecting it in the following terms:

"For a long time I have been led to the observation, that a solution of arsenous acid is so completely precipitated by pure hydrate of iron recently precipitated, and suspended in water, that a current of sulphuretted hydrogen directed through the filtered liquor, in which there is contained a small quantity of hydrochloric acid, does not point out the least trace of arsenious acid. I have found, besides, that if there be added to this body a few drops of ammonia, and it be digested with a gentle heat with arsenious acid reduced to very fine powder, it very gently transforms this latter substance into combination (*arsenite basique*) with tritoxyde of iron completely insoluble. A series of observations founded on this, has given me the firm persuasion, that this body reunites the most favourable conditions for serving as an antidote to arsenious acid, whether solid or in solution. Dr. Berthold has joined me in examining this subject in all its forms, and in making the most rigorous experiments on it. The results of this examination have surpassed our most anxious expectation, and has confirmed us in the persuasion, that the hydrate of the tritoxyde of iron is a better antidote for arsenious acid, solid or in solution, than albumen is for corrosive sublimate.

"Young dogs, not more than a foot high, to which we had given from four to eight grains of arsenious acid, very finely powdered, and whose œsophagus we had tied to prevent vomiting, have lived more than a week, without offering either symptoms during life, or appearances on a post mortem examination, of poisoning by arsenic. The excrements, which were in very small quantity, seeing that the animals took neither food nor drink, contained almost the whole of the poisonous substance, in the state of an arsenite (*basique*) of the tritoxyde of iron, but presenting no trace of free arsenious acid. We convinced ourselves by experiments upon animals, that a quantity of the hydrate of the tritoxyde of iron, varying from two to four drachms, with sixteen drops of ammonia, are sufficient to transform, in the stomach, from eight to ten grains of well powdered arsenious acid, into an insoluble arsenite. It is easy to conceive that we might, in cases of poisoning by arsenic, administer this substance in much more considerable doses, with or without ammonia, by the mouth or in the form of enema, since the hydrate of the tritoxyde of iron, being completely insoluble in water, absolutely exercises no action on the animal economy."*—*Archives Generales, Oct.* 1834.—*Dublin Journal, Jan.* 1835.

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15. *M. Dupuytren.*—This very distinguished operator died in Paris on the 8th of February, after a lingering illness of several months, aged 57. He has

*From some experiments on the above subject, made by Mr. Kane, it would appear that further investigation is necessary before the conclusions of Dr. Bunsen can be recognized as perfectly correct. On digesting recently precipitated peroxyde of iron in a solution of arsenious acid, for several hours, and at different temperatures, the liquor filtered, in all instances, contained much arsenic. The mixed proto and peroxydes of iron were also tried, and found equally inefficacious in the complete removal of arsenious acid from its solution.

left the reputation of being the first operating surgeon in France, and probably in Europe. Domestic affliction preyed upon his mind for the last few years of his life. He has left Madame Beaumont, his only daughter, a fortune of nearly 7,000,000 francs, besides a legacy of 200,000 francs to found a chair of medico-chirurgical pathology. He has also left 100,000 crowns to found an asylum for twelve aged physicians. The annals of surgery do not afford the name of an individual so extensively known; and it is doubtful whether any man has existed who has performed so many operations in surgery, or who has exerted a greater professional influence throughout the civilized world.—*Boston Med. and Surg. Journal*, March, 1835.

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16. *Spina bifida punctured. Fatal termination.* By Dr. Schmidt.—The child which was the subject of this case, was born of healthy parents. At birth, a depression large enough to receive two fingers occupied the situation of the arches of the upper part of the sacrum, and the lower lumbar vertebra. In this depression an accumulation of water gradually formed, which in the course of three weeks assumed the appearance of a convex vesicle, of a reddish blue colour. There was paralysis of both sensation and motion in the lower extremities, which remained in a semiflexed position. The configuration of the head was somewhat peculiar; its sides were flat; the prominence of the forehead formed a kind of angular projection; the fontanelles were very large, and the sutures were open. The sagittal suture was even separated to the extent of a finger's breadth. Notwithstanding all this, the child seemed to be well nourished; slept much, and nursed when awake. The swelling and the paralysis, however, increased daily, and the legs became more and more flexed.

Dr. Schmidt explained to the father, who was very anxious that something should be done for the child, that the only means of relief must consist in a small puncture to let out the fluid; that the operation, although in itself simple, might involve serious consequences, and that if performed, its success would be exceedingly doubtful, on account of the indications that existed of hydrocephalus. He, moreover, expressed his unwillingness to perform it without a previous consultation.

Some time afterwards, on the 14th of May, he called to see the child, and found that the father had on that day made a puncture with a needle, which allowed a yellowish serous fluid to escape in drops. The child, however, continued lively. On the 15th, the puncture having closed, the father renewed it, and after the water had escaped, the surface of the tumour was somewhat corrugated. On the 16th, the child was restless,—was affected with convulsions, and refused to nurse. The tumour and the adjacent parts, to the extent of two inches, were inflamed, and hot to the touch, and all the indications of a general febrile condition were present. These were abated by antiphlogistic means, and the suppurated part was covered with cerate. By this treatment it was reduced to a more healthy appearance, and became somewhat smaller. From the 16th to the 19th the inflammatory symptoms continued to abate, and the child slept considerably, but was so susceptible, that it started from the slightest noise. The bowels having been constipated for two days, some syrup of manna was ordered, the operation of which was followed by a greater

state of quietude. Suppuration now manifested itself at the site of the puncture; the convulsions recurred, and the superficial muscles were in an almost constant state of convulsive action. The disposition to sleep increased; the suppuration at the lower point became more profuse, while that above diminished, and the opening became almost closed. After some time the fever augmented, attended with constipation; the tumour became red, hot, and swollen, and things continued in this condition until the second of June, when death took place.

The following phenomena were discovered on dissection: the cranial bones so thin that they could be cut with scissors; many parts of the frontal bone of the size of a bean, were not ossified, and the frontal protuberance remarkably thin, and not entirely solidified. The parietal bones were in the same condition. The brain was of the consistence of pap; on the right side of the foramen magnum there was an appearance of coagulable lymph, and the lower surface of the left hemisphere presented an orange-coloured spot. When the ventricles were opened, about sixteen ounces of transparent yellowish coloured serum escaped, besides a considerable quantity of a yellow coloured material which remained in those cavities. The thoracic and abdominal organs were exsanguined, and there was a small quantity of serum in the pericardium and the right pleura. When the spinal tumour was laid open, a considerable quantity of a purulent-like sanies flowed out, and the spinal marrow, at its lower part was entirely defective, merely leaving the free extremities of the nerves. Above, some vestiges of that organ, of the consistence of pap, were discovered. The membranes of the spinal marrow were preternaturally thickened. The cleft of the spine occupied the two last true, and the whole of the false vertebra. Its length was four inches; its breadth one and a half inches, where it was greatest, which was on a level with the first sacral vertebra. Above and below this point it became gradually narrower.—*Hufeland and Osann Journal für Practischen Heilkunde, June*, 1834.

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17. *Entozooa in the Eye.*—In a memoir recently published by Dr. Anton Gescheidt, on this subject, we find an enumeration of the following species, which he has found in the human eye: 1. four fragments of *Distoma oculi humani*, in the eye of a child, aged five months, which died of tabes mesenterica, and was affected with a capsulo-lenticular cataract. 2. three fragments of *filaria oculi humani*, in the cataractous lens of an old man, aged 61. 3. An Echinococcus hominis, between the lens and choroid coat of the eye of one of the pupils of the institution for the blind, who died of phthisis, aged 24. Other cases are reported, in which entozooa were found in the eye of dogs, a hog, and in the falco lagophus.—*Hecker's Wissenchaftlichen Annalen der gesammten Heilkunde, February*, 1834.

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18. *Plan of tying the Internal Mammary Artery.* By M. Bonnafont, Demonstrator of Anatomy at the Hospital of Instruction of Alger.—The internal mammary artery is far from being beyond the action of external bodies. Placed at first behind the superior third of the posterior surface of the sternum, it diverges by degrees from it to run between the fibro-cartilages of this bone and the interval corresponding to the fifth, sixth, seventh, and eighth ribs, where it is distant almost an inch from the external border of the sternum.

Placed immediately on the pleura, covered by the intercostal muscles and the integuments, it may be easily wounded. The calibre of this artery being sufficiently great to produce mortal hemorrhage if wounded, it is of consequence to know how to stop this fatal bleeding by placing a ligature on the artery. The following is the operation recommended:

1st. Cut the integuments down to the external intercostal muscles, to the extent of two inches in lean, and two and a half in fat subjects, beginning at the external border of the sternum, encroaching a little on its external surface, and stretching to the middle of the corresponding intercostal space, following a line parallel to the axis of the ribs.

2nd. Tie carefully the small arterial branches, which might embarrass the operator by the blood which they furnish.

3rd. Cut, by means of a director and straight-bladed bistoury, layer by layer, the external and internal intercostal muscles, taking care, in cutting the latter, to place the director in a sufficiently oblique direction, to avoid wounding the pleura. That being done, the internal mammary artery will be distinctly observed placed between the nerve, which is situated externally, and the vein, which is placed internally, and above the pleura, to which it no where adheres. Nothing is then easier than to place, by means of a crooked needle, or a director a little bent, a ligature on the artery. The wounding of the pleura may be avoided by taking the precaution mentioned above.

As the inferior portion may furnish blood from its anastomosing with the epigastric artery, it may be tied by the same operation in the intercostal space below.—*French Lancet, Aug.* 1834.—*Edinburgh Med. Surg. Jour. Jan.* 1835.

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19. *Some Observations on Phlebolites.* By Dr. John Reid.—The accompanying preparation is a portion of one of the broad ligaments of the uterus, in the veins of which are observed a number of small rounded osseous-looking bodies, which have received the name of Phlebolites. They are described by Beclard in his Anatomie Generale under the chapter on Veins, and by Jules Cloquet in his Pathologie Chirurgicale; but I am not aware of their having been noticed by any English author, though they must have occasionally been seen by those much engaged in dissections. Their presence does not appear to be attended by any bad effects, and they consequently possess little practical importance; but the nature and cause of their formation may, ere long, become an object of considerable interest in physiology, as serving to strengthen or confirm some of the doctrines concerning the living fluids of the body. They cannot be considered as of rare occurrence. I have now seen them in five instances, and four of these have been within the last twelve months. In three of these they were found in the uterine veins; in one (a male) in the vesical veins; and in the present case, both in the vesical and uterine. They varied in size from that of a millet seed to that of a large pea. They varied in number from two to more than a dozen. In all the cases in which I have examined them, they seemed to be placed loose in dilatations of the veins, allowing sufficient space for the blood to pass between them and the coats of the vein. Some of these veins were of very small size in the undilated portions, and required a careful examination to be convinced that they were placed in veins; while others were of sufficient size, as to render this apparent almost at the first glance. The subjects in which I found them were all advanced beyond the middle period of life.

Beclard and Cloquet describe them as being most frequently enclosed in layers of fibrinous matter or coagulated blood; but in all, except in the present case, I have found them without any covering whatever, and in nearly all of them of a bony hardness throughout.

In the preparation before you a very large one may be observed with a clot of blood. Several smaller ones were also observed enveloped in coagulated blood. The spermatic veins in this case, in the branches of which these were deposited, were much enlarged.

According to Cloquet and Beclard, they have been also found in the hæmorrhoidal veins, in the spermatic veins of the male, in the saphenæ veins, and twice in the vena cava inferior. In one of the cases described and delineated by Cloquet, he states, that the smaller ones were formed of a little soft clot of blood; that those of a larger size contained in the centre a nucleus of white fibrinous matter; that the largest had in their centre an osseous-looking nucleus, upon which the white fibrinous matter was arranged in concentric layers, the internal very hard, the others becoming gradually softer as they approached the surface. He also gives a drawing of a round fibrinous mass taken from the vena cava inferior, containing an ossific-looking matter in the centre, from which a number of rays of the same substance passed through the fibrinous matter towards the circumference. Another specimen similar to this was seen by Cloquet in Sœmmering's museum, and was said to have been taken from the vena cava inferior of a child.

I am not aware that the chemical composition of these bodies has been accurately ascertained. Cloquet speaks of them as composed of phosphate of lime, but he does not state that they were analyzed. Mr. Kemp had the kindness to analyze two of them taken from different subjects. He has not yet been able to obtain accurate results; but he states that he is certain that both were principally composed of phosphate of lime, of carbonate of lime, and of animal matter, and that it appeared to him that these earthy salts and animal matter were nearly in the proportions that exist in the bones. He has promised to make a more accurate analysis; and we will then see how far they differ from, or agree with, the osseous texture in their chemical composition. It may also be stated, that the animal matter seemed composed in a great part of gelatine; but this would require farther researches.

It becomes an interesting subject of inquiry, whether these bodies are formed by a deposition of the earthy salts contained in the blood, mixed with some of the animal matter, or whether this depends upon some vital action in the fluids, corresponding to the formation of the osseous texture. Neither Beclard nor Cloquet give any opinion upon the cause of their formation. The fact of their being only found in the depending veins, where the flow of blood is retarded, and the improbability of the formation of any osseous texture in the interior of these vessels, strongly favour the notion of their being merely depositions from the blood, as urinary calculi are from the urine; while the nature of their formation, the gradual conversion of the fibrinous layers into osseous, the radiation of the ossific matter through the fibrinous clots, and their chemical composition (if their similarity to bone is confirmed,) must strongly incline us to ascribe their origin to something more than mere physical or chemical laws. Additional observations, by furnishing more extensive data, may enable us to come to more decisive conclusion on this interesting question.—*Ib.*

UNIVERSITY OF MARYLAND.

At a public commencement held on the 18th of March, the degree of *Doctor of Medicine* was conferred on the following gentlemen respectively:

	Residence.	*Subject of Thesis.*
Samuel G. Baker,	*Maryland,*	De Variola.
Alex. H. Bayly,	*Do.*	On Lues venerea.
Joseph C. Cockey,	*Do.*	On Aneurism.
John Pearson Smith,	*S. Carolina,*	On Cholera Maligna.
Daniel G. Keedy,	*Maryland,*	On Delirium Tremens.
Walter T. Belt,	*D. of Colum.*	On Hemorrhage.
John H. Boarman,	*Maryland,*	On Hepatitis.
William H. Calvert,	*Do.*	On Cathartics.
Theodore Linthicum,	*Do.*	On the Atmosphere, etiologically considered.
George A. Yearly,	*Do.*	On Catarrhus Epidemicus.
J. C. P. Wederstrandt,	*Louisiana,*	On Blenorrhœa.
Richard Harwood,	*Maryland,*	On Phthisis Pulmonalis.
Charles H. Steele,	*Do.*	On Measles.
M. Montrose Pallen,	*Virginia.*	On Spinal Irritation.
James B. Waugh,	*New York,*	On the History of various Pathological Theories.
Alexander H. Bear,	*Virginia,*	On Digestion.
William Power,	*Maryland,*	On Delirium Tremens.
Charles R. McClellan,	*Do.*	On the Fever which appeared at the Baltimore Alms House in the fall of 1833.
Samuel T. Knight,	*Do.*	On Phrenitis.
Charles M. Hitchcock.	*Ohio,*	On the Physiology of the Iris.
George C. Perry,	*Maryland,*	On Hemorrhoids.
John W. Stone,	*Do.*	De Pathologia.
Cadmus Dashiell,	*Do.*	On the Circulation.
William W. Watkins,	*Do.*	On Delirium Tremens.
Benedict J. Gardiner,	*Do.*	On Acute Rheumatism.
Charles Minor,	*Virginia,*	On Medical Observation & Experience.
Peachy H. Gilmer,	*Do.*	On Phrenology.
Nathan H. Crawford,	*Do.*	On Intermittent Fever.
Charles J. Gilleland,	*Pennsylvania.*	On the Catamenia.
James L. Anderson,	*Maryland,*	On the generation of Intestinal Entozoa.
Edward H. Henry,	*Virginia,*	On Cholera Infantum.
John Ch. Nairn,*	*Maryland,*	De natura chemica et medica et de pathologia bilis.

* The medal for the best Latin dissertation was awarded to this gentleman.

Allen Bowie,	*Maryland,*	On Peripneumonia notha.
Creed Thomas,	*Virginia.*	On Scarlet Fever.
Robert H. Archer,	*Maryland,*	On Dysentery.
John F. Price,	*Do.*	On Medical Education.
Charles McCormick,	*D. of Colum.*	On the Study of Medicine.
James G Coombe,	*Do.*	On Spasmodic Cholera.
Thomas A. Healey,	*Maryland,*	On Erysipelas.
William H. Creager,	*Do.*	On the Theories of Conception.
Washington Lyon,	*Tennessee,*	On the Anatomy of the Eye.
Washington Finley,	*Maryland,*	On Intermittent Fever.
Thomas H. Buckler,	*Do.*	On Animal Heat.
George W. Wilson,	*Do.*	On Digestion.
William T. Jones,	*Do.*	On Animal Heat.
Marcus Ahlenfeld,	*Pennsylvania,*	De morbis venereis.
Frederick Butler,	*Maryland,*	On Vaccination.
Robert H. Ayres,	*Do.*	On Pericarditis.
Dr. W. K. Schley,*	*Georgia,*	On the best Winter Residence for the Consumptive.
Dr. John Mayo,	*Virginia,*	On Erysipelas.

ROBLEY DUNGLISON.
Dean of the Medical Faculty.

* Drs. Schley and Mayo were already graduates of the University of Pennsylvania.

Editorial Notices and Acknowledgments.

It will be seen that with the commencement of our second volume, we have made considerable improvement in the typographical execution of the work. The whole of the original and selected papers, and the review department, of this number are printed on new type; and it is proposed to make a similar improvement in the other portions of the Journal.

A communication from Professor Smith, with some others, have been crowded out of the present number. They will appear in our next. Dr. Lebby is informed, that we shall be pleased to receive the papers to which he refers.

The following publications have been received within the last month:

Chemical and Medical Researches on Kreosote, its preparation, properties and use. By E. Miguet, Member of the Chemical and Philosophical Society of Paris, &c. Translated from the French, by William Wetherill, M.D. Philadelphia. Judah Dobson, 1835. (*From the publisher.*)

Magazin der Auslandischen Literatur der gesammten Heilkunde, und arbeiten des Aerztlichen Vereins zu Hamburg, herausgegeben von Dr. G. H. Gerson und Dr. Nikol. Heinr. Julius, 8 Band. 1 & 2, heft. for July, August, September and October, 1834. (*In exchange.*)

Græfe und Walther Journal für Chirurgie und Augenheilkunde Bde. 20, Stuck. 4. Bde. 21, Stuck. 1 & 2, 1833—34.

Rust's Magazin für die gesammte Heilkunde. Bde. 41, heft. 1, 2 & 3, und Bde. 42, heft. 1 & 2, 1834.

Tiedemann und Treviranus Zeitschrift für Physiologie. Funfter Bande Erst. Heft. 1833.

Hufeland und Osanns Journal für Practischen Heilkunde, Bande 77, Stuck. 5 & 6, for 1833, Bande 78, Stuck. 1, 2, 3, 4, 5, 6, & Bde. 79, Stuck. 1, 1834.

Hecker's Wissenchaftlichen Annalen der gesammten Heilkunde, for Dec. 1833, and January, February, March, April, May, June and August, 1834.

Jahrbucher der homöopathischen Heil-und Lehranstalt. 2, heft. 1834.

Revue Medicale Français et Etrangère, Nos. 10 & 11 for October and November, 1834. (*In exchange.*)

Journal Hebdomadaire des Progrès des Sciences et Institutions Médicales, Nos. 43, 44, 45, 46, 47, 48, 49, 50. (*In exchange.*)

Annales de la Medécine Physiologique, Nos. 9 & 10, for September and October, 1834. (*In exchange.*)

The Edinburgh Medical and Surgical Journal for January, 1835.

The Lancet, Nos. 6, 7, 8, 9, 10, 11, 12, 13, 14, for November and December, 1834.

The London Medical Gazette, for November and December, 1834.

The Dublin Journal of Medical and Chemical Science, No. 18, for January, 1835.

The London Medical and Surgical Journal, Parts 34 & 35, for November and December, 1834.

The Boston Medical and Surgical Journal, Nos. 4, 5, 6, 7, for March, 1835. (*In exchange.*)

The United States Medical and Surgical Journal, No. 8, for March, 1835. (*In exchange.*)

The Boston Medical Magazine, Nos. 15 & 16, for March, 1835. (*In exchange.*)

The Western Medical Gazette, No. 10, for February, 1835. (*In exchange.*)

Address to the Alumni and Graduates of St. John's College and to the friends of Education in Maryland. By Hector Humphreys, D.D. President and Professor of Moral Science, delivered after the commencement in February, 1835. Annapolis. Printed at the request of the Visitors and Governors of the College.

Report on the New Map of Maryland, and of the Geologist appointed to make a Geological Survey of the State. (*From Professor Ducatel.*)